

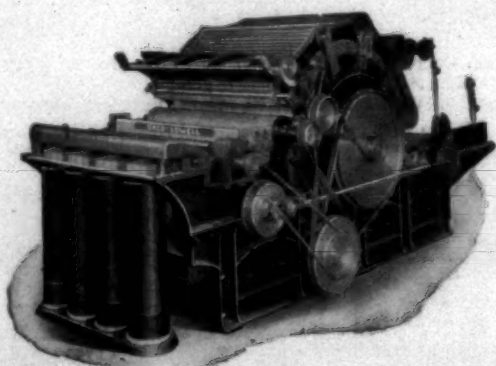
# SOUTHERN TEXTILE BULLETIN

VOL. VII

CHARLOTTE, N. C., JULY 16, 1914

NUMBER 20

## SACO-LOWELL SHOPS



FOUR COILER WASTE CARD

### TEXTILE MACHINERY

Complete Waste  
Reworking Plants

ROGERS W. DAVIS, - Southern Agent - CHARLOTTE, N. C.

## OUR RINGS

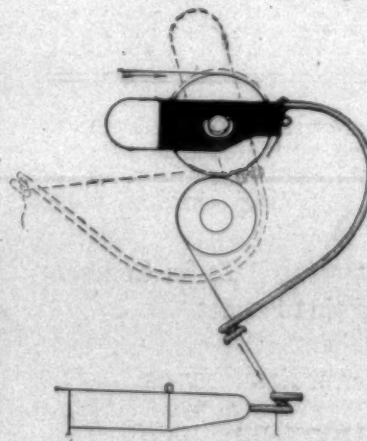
Set the Standard for Quality

THERE ARE NONE OTHERS  
"JUST AS GOOD"



MIRROR SPINNING RINGS  
TRADE MARK REG. U.S. PAT. OFF.  
DRAPER COMPANY  
HOPEDALE, MASS.

## The Smith Stop Motion for Two Ply Twisting



Eliminates Waste;  
prevents roller laps;  
enables the help to  
tend more spindles;  
the only simple device  
for the purpose.

*Send for Special Circular*

**DRAPER COMPANY**

HOPEDALE, MASS.

*Southern Agent*

J. D. CLOUDMAN, 40 South Forsyth Street, Atlanta, Ga.

## Farbwerke-Hoechst Co.

—FORMERLY—

H. A. METZ &amp; CO.

Aniline and Alizarine Colors, Dyestuffs  
and Chemicals

Sole Licensees and Importers of the Products of

FARBWERKE, vormals MEISTER LUCIUS & BRUENING  
Hoechst - on - Main, Germany

122 Hudson St., - - New York, N. Y.	210 South Tryon St., Charlotte, N. C.
140 Oliver St., - - Boston, Mass.	1418 Empire Building, - Atlanta, Ga.
104 Chestnut St., - Philadelphia, Pa.	20-20 Natoma St., San Francisco, Cal.
23 South Main St., Providence, R. I.	45 Alexander St., - - Montreal Can.
317 North Clark St., - - Chicago, Ill.	28 Wellington St., - - Toronto, Can.

A. H. Washburn, President

F. H. Washburn, Treas. &amp; Manager

## WASHBURN PRESS

(RAY PRINTING CO.)

Commercial, Halftone and Color Printing

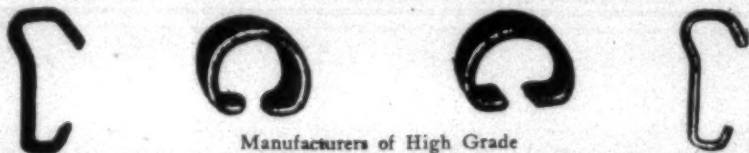
Engraving, Embossing and Lithographing

BLANK BOOKS AND SPECIAL RULED BLANKS  
MADE TO ORDER28 West Trade Street  
Phone 343

Charlotte, N. C.

MARCUS A. DARY  
Agent and TreasurerFRED H. DARY  
Superintendent

## DARY RING TRAVELER COMPANY



Manufacturers of High Grade

SPINNING AND TWISTING TRAVELERS  
TAUNTON, MASSACHUSETTS

SOUTHERN REPRESENTATIVES:

JOHN E. HUMPHRIES, Greenville, S.C. CHAS. L. ASHLEY, Atlanta, Ga.

Manufacturers Should Look Up the Advantages of the

## Metallic Drawing Roll

Over the leather system before placing orders for new machinery, or if contemplating an increase in production, have them applied to their old machinery. It is applied successfully to the following carding room machinery:

Railways	Detaching Rolls for Combers
Sliver Lap Machines	Drawing Frames
Ribbon Lap Machines	Slubbers
Comber Draw Boxes	Intermediate Frames

25 TO 33 PER CENT. MORE PRODUCTION  
GUARANTEED

For prices and circular write to

The Metallic Drawing Roll Co.  
INDIAN ORCHARD, MASS.

## John P. Marston

Gum Tragasol

Kerston Softener

Bleaching Assistant

Bleachers Blue

247 Atlantic Ave.

Boston

## SOUTHERN DYESTUFF & CHEMICAL CO.

Charlotte, N. C.

Southern Selling Agents

NATIONAL GUM &amp; MICA COMPANY

Manufacturers and Importers of

WEIGHTING, SOFTENING, FINISHING AND SIZING COMPOUND

WEIGHTING SOFTENER  
CONCENTRATED SOLUBLE TALLOW  
WHITE SOFTENER  
SWISS GUM  
S. S. SOFTENER  
FINISHING PASTES  
BLEACHERS SOAP

MIKAH COTTON SOFTENER  
SLASHER OIL  
SOLUBLE OIL  
DIRECT and SULPHUR COLORS  
BASIC COLORS  
POTATO STARCHES  
SAGO FLOUR

Perfect materials at low prices. Special information given free by practical men for  
Sizing, Weighting, Finishing, and Dyeing of all kinds of goods.

If your Finishing is not satisfactory, call on us. We can help you.

Phone 2972.

Office 1203 and 1204 Commercial Bank Building, Charlotte, N. C.

## DIXON LUBRICATING SADDLE CO.

BRISTOL, R. I.



Use Dixon Patent Stirrup Adjusting  
Saddles, the latest invention in  
Saddles for Top Rolls of  
Spinning Machines

Mfrs. of all kinds Saddles, Stirrups and  
Levers

Send for Sample

Trade-Mark

## "NIGRUM" Treated Wood SADDLES

Reg. U. S. Pat. Off.

Which Require No Oil or Grease and Save You Money in Many Ways

If not, write to us at once for information



GRAPHITE LUBRICATING COMPANY, - - Bound Brook, N. J.

## PURO

Don't Pay Good Money for  
Impractical, Unmechanical  
and Often Worthless  
Fountains.

Here is a practical Fountain, which  
combines the Faucet and Bubble  
Features—takes care of the overflow  
waste, and insures

### SAFETY AND SERVICE

This is an age of sanitary plumbing  
and the Sanitary Drinking Fountain is  
one of its important subdivisions.

SAFETY FIRST PURO SERVICE ALWAYS

Is made of heavy brass with extra  
heavy nickel plate. "Bubbler" easily  
controlled by separate "squeeze" handle.  
No spurts—no choking—inside reg-  
ulation prevents "shower-bath."  
Faucet is controlled by another squeeze  
handle. Faucet gives full water pres-  
sure. Has thread for hose if wanted.

Write us the number of your employees  
and water pressure and we'll present  
an interesting proposition to you  
promptly.

Puro Sanitary  
Drinking Fountain Company

342 Main Street, Haydenville, Mass.



Actual Size 7" High

# SOUTHERN TEXTILE BULLETIN

VOL. VII

CHARLOTTE, N. C., JULY 16, 1914

NUMBER 20

## Development of the English Cotton Industry

Although some 22 countries are engaged in the processes of spinning and weaving cotton, almost every country of the world is a buyer of English cotton yarns and cloth. In spite of the fact that all the raw material has to be imported the English cotton industry has developed much more rapidly than that of any other country. The climate, the numerous coal mines at the very doors of the mills, and the traditional and inherited skill of the operatives have combined to make Lancashire the seat of the industry in England.

Cotton goods constitute about one-third of the manufactures exported from England. The industry is noted for the great variety of the yarns spun and the fabrics woven. The tendency of the spinning and weaving branches of the trade is constantly toward separation, although many concerns still carry on both processes on the same premises. Since 1912, the looms have about caught up with the spindles; that is, they are now capable of handling all the yarn that is not exported. The last decade has seen an especially marked development of the cotton industry, and 12,000,000 spindles and 90,000 looms have been added since 1905, rather exceeding for the time being the requirements of the trade. In 1894, the number of spindles in Lancashire was about 43,000,000, in 1904 about 45,000,000, and in 1914 they are about 59,000,000. No new mills are desirable now, especially as the supply of skilled labor, and more particularly juvenile labor, is being taxed to the utmost. This is notably the case in the yarn industry. In recent years spinning has developed chiefly in the districts of Oldham, Bolton, Ashton, and Rochdale, and weaving in the districts of Blackburn, Burnley, Preston, and Nelson. Different districts specialize in different classes of work. Blackburn is known for its shirtings, Burnley for printing cloth, Nelson for satens, and so on.

About 337,000 people are said to be engaged in spinning and weaving while a great many more are employed in numerous subsidiary and dependent industries, such as bleaching, dyeing, finishing, calico printing, manufacture of ready-made clothing, preparation of dyes, etc. In addition, when it is remembered that the English industry consumed last year 4,427,000 bales of cotton, and that all of this raw product had to be hauled from the docks or the railways to the spinners, thence perhaps to the bleach-

er, the dyer, the weaving mills, the finisher, and the printer, and thence back to the docks or the railways as a finished product, it may readily be seen that a very large number of carters must be employed, besides those who actually pack and ship the goods abroad.

An interesting calculation has recently been published as to the effect upon the English cotton industry of the fluctuations in the price of raw cotton. England consumes about 4,000,000 bales each year on the average. At one time cotton could be bought for 6 cents per pound. At the beginning of 1914 it was 15 cents, and was not lower than 12 cents at any time in 1913. A difference of 1 cent per pound makes a difference of \$5 per bale, and 3 cents makes a difference of \$15 per bale, while \$15 per bale makes a difference on 4,000,000 bales of \$60,000,000. The price of the raw material largely governs that of the manufactured article, and high prices restrict trade, especially in countries like India, China, Africa, Turkey, and the Balkan States, where the purchasing power of the individual is comparatively limited. It is interesting to note that, if the 350,000,000 Chinese were to consume cotton goods to the same extent as some of the European peoples, it would require more than 20,000,000 bales of raw cotton to supply them. A similar calculation may be made for the now scantily clothed 400,000,444 Africans, so that the expansion of the cotton-goods trade seems bound to take place as these countries become more civilized.

Three-fourths of the product of the Lancashire spindles and looms goes abroad, India alone taking about 45 per cent and being by far the best single customer. While the United States produces five-eighths of the entire cotton crop of the world, it exports only about 5 per cent of its production. Just before the passage of the tariff act of October 3, 1913, a member of a large manufacturing firm in the Blackburn district expressed the opinion that the lowering of the American duties on cotton cloths would tend to improve the Lancashire trade for a time, but that later, through changes in the American industry which would lead it to cultivate foreign fields, the Lancashire industry might stand to suffer. This seems to be the general opinion prevailing here at present.

As stated, the year 1913 opened full of promise and closed badly,

the latter fact being due chiefly to the overstocking of many of the world's markets and the serious political and financial disturbances in several important consuming countries. Almost worse than the lack of orders in 1913 were the serious labor unrest and disputes of one sort or another, and especially the abandonment of the so-called "Brooklands Agreement," an important contract entered into some years ago between organized employers and operatives. Taken altogether, however, it was not by any means a bad year in the cotton industry. Spinners had a very good year, while cloth manufacturers did well in the first six months, and some were still profitably employed at the end of 1913. Early in 1914, a reaction set in in both branches, and there have been considerable stoppages since in the Burnley, Blackburn, Colne, and Nelson districts.

In his annual tables John Kidger, of Oldham, selects 100 typical spinning companies and deals with their financial position, as shown by their balance sheets. These 100 mills had a share capital of \$17,966,460 and a loan capital of \$11,628,175. For the year ended November 30, 1913, their net profits were \$2,627,326, and the average dividend 8 per cent, as compared with \$2,717,696 and 7 1-5 per cent average dividend for the previous year. This 8 per cent dividend is the fourth highest in 30

years. In 22 of the last 30 years they have returned a profit, the aggregate being \$34,107,731, as the other eight years of \$4,413,153, or a net profit of \$29,694,578. The average paid to shareholders works out at 5 1-3 per cent for the 30 years.

Another authority, William Tattersall, analyzes the returns of 70 spinning companies, with a paid-up share capital of \$12,470,523 and a loan capital of \$5,476,213, and shows that the profit on the share capital amounts to 13.35 per cent, as compared with 12.70 per cent in the previous year, and on share and loan capital combined 9.30 per cent in 1912. The total spindleage of the mills held by the 70 companies is 6,050,070.

Counting bales against spindles, the consumption of American cotton in the past has been said to be, roughly, one-tenth of the spindles. For instance, there are about 147,000,000 spindles now in operation throughout the whole world, and the estimated American crop in bales is somewhat less than one-tenth of that number.

The following table, taken from the "Comituburo" Handbook, published in September, 1913, gives the number of spindles and looms, consumption of raw cotton in bales, and the number of operatives employed in the principal manufacturing countries, according to the latest returns or estimates:

Countries	Spindles.	Looms	Consumption in bales	Operatives employed
Great Britain	58,481,000	786,000	4,427,000	637,000
United States	31,921,000	695,000	5,669,000	(1)
Germany	10,163,000	230,000	1,980,000	375,000
Russia	7,633,000	213,000	1,400,000	370,000
France	7,400,000	108,000	1,120,000	161,000
India	6,464,000	89,000	2,050,000	244,000
Austria-Hungary	4,864,000	155,000	878,000	170,000
Italy	4,583,000	140,000	900,000	200,000
Japan	2,204,000	21,000	1,357,000	94,000
Spain	1,900,000	55,000	370,000	70,000
Belgium	1,715,000	24,000	250,000	11,000
Brazil	1,520,000	50,000	330,000	106,000
Switzerland	1,398,000	22,000	99,000	21,000
China	1,000,000	5,000	525,000	(1)
All other countries	5,813,000	159,000	1,078,000	182,000
Total	147,058,000	2,752,000	22,433,000	2,611,000

(1) Not stated. According to the census returns the number of spinners employed in cotton mills in the United States in 1909 was 67,378, the number of spindles in that year being 27,425,608.

years and the highest since 1907, compared with an aggregate loss in the banner year for spinners, when 15 7-8 per cent was paid. Mr. Kidger also discusses some 120 companies, which he describes as the best profit earners, all having up-to-date mills, fully equipped with the most modern machinery for producing yarn at the lowest possible price. He finds that the average dividends and bonuses paid by these mills were 10 1-2 per cent, as against 9 per cent paid in the pre-

In the last four years the total exports of cloth to all countries was as follows: 1910, 6,018,454,000 yards; 1911, 6,653,613,000 yards; 1912, 6,912,919,700 yards; 1913, 7,075,558,400 yards. The Textile Recorder has grouped the exports of cotton cloth in 1913 and presents the following figures for the amounts sent to the various great sections of the world: To India, Straits Settlements, and Ceylon, 3,189,183,000 yards; to the Far East, (Continued on Page 5.)

# Commercializing a Technical Training

Harry C. Haynes before Bradford-Durfee Textile School

Whatever influence foster and encourage a determination in a young man to seek a technical training, there are almost invariably three diametrically opposed objects involved in the process of acquiring such an education.

The student, choosing the line of industry to which he intends to devote himself, usually most desires the shortest road to success and the acquisition of position and wealth to better advantage than his fellows. Or, possibly, through influences of inheritance, he may desire to maintain a family position and prestige in an industry and follow in the footsteps of his father.

Whatever may be the process of technical training, the crude result is the same. A condition is produced either properly or improperly, expeditiously developed or long deferred, of a high, low or medium order. This last, perhaps more than the others, is dependent upon individual characteristics.

Accepting this unmaterial condition as the reward for months of studious application to classroom and laboratory, or years of unremitting labor among machines and working men and women, the commercialism, uses and investment of this asset is the subject I wish to place before you. Such condition of mind and body is but the "stock in trade" of a young man starting in business with himself. To this stock, of course, we will add continuously. I wish to point out that this nucleus to future commercial greatness will never be other than working capital.

To standardize selling methods and predetermine market possibilities is but a different application of the same principles which govern standard operations for production. The shrewd investor in mill securities carefully analyzes both dead property valuation and live operating possibilities of his property. Very few men put their money into mill property only with a knowledge that the operating organization is sound in principle and personnel. To accept security through confidence in the ability of a single man to conceive and execute all profitable measures is to take the very short end of a gamble with life and death.

Buying, manufacturing and selling conditions, always changing and in a state of evolution, are at present violently agitated. Increased cost of labor and material have both been saddled with more or less responsibility for unsatisfactory aspects of business. Treasurers decry the acts of selling houses and directors; superintendents bend under the burden of hardships inflicted by other superiors, and so down the line of delegated authority to the smallest and most humble of an association of graded men and responsibilities which is not collectively an organization.

Years ago in the textile industry mills were comparatively few in number, limited in equipment, sim-

ple in variety of product and served by a high order of intelligent labor. Advances in mechanical research and invention have about kept pace with the demands for increased unit human service. However, with this advance have come increased demands upon the resourcefulness of labor, and the numerical increase in machines of a growing mill has been enormous.

Time in which to accomplish results has also been steadily decreasing, until today the operating mill man, or superintendent, as he is commonly called, cannot, through sheer physical inability, occupy his former self-contained position of usefulness. Several years ago one man could know his mill of a few thousand spindles intimately and the successful control of his equipment and labor was a simple matter. Today the same form of organization and the same single man is supposed successfully to handle, and does struggle to administrate, a manufacturing plant of 500 per cent or more increase in size or number of units and with rapidly deteriorating instruments of labor.

Industrial pressure upon mill operating executives has not as yet, to any extent, produced permanent remedial measures. The conventions of our forefathers still endure in the organization of the textile industry, and as business demands have incessantly increased the instinct of individual self-preservation has come strongly to the front. Men still talk in whispers and look wise over "trade secrets" known to them alone, and superintendents believe they "hold their jobs" through individual experience and qualifications to which nothing can be added by association with unconventional methods.

The young technical man about to engage in the commercializing of his training through the textile industry should then further school himself until the habit of analysis is well formed. Unless he would suffer the hardships of the pioneer the young man should select a field of opportunity for work where science has at least begun to replace chance or guesswork and organization; or the harmonizing of effort has been recognized as a constructive measure of permanent success. These conditions are not always easily recognized. An inclination soberly and thoroughly to analyze all conditions surrounding a problem is one of these developments and is to be highly cultivated. To apply this analytical examination not only to a branch of industry and field for work but to one's self is of tremendous value to a man, either young or old.

Possibly the most serious difficulty to confront the young man will be his battle in the exercise of his reasoning powers against traditions and local conventions. He may secretly entertain brilliant aspirations for the doing of things yet undone and for accomplishment along lines of radical departure from his

immediate examples. The practice or habit of his mill community will very likely oppose his progressive thought, and the professional esteem of his fellows is, to the young man, a very precious possession.

Incompetent men apparently succeed in many instances and their lack of constructive effort may not overtake the business committed to the charge for a very long time. The potential of able predecessors may carry the business along in spite of bad management and pride in prestige, often cover real financial losses. The price of commercial elevation of an individual is sometimes a long one for the industry involved.

Good organization is an instrument for the elimination of waste of all kinds and unnecessary wear and tear of business. Standard organization is an analytically recognized plan or grouping of methods for scientifically delegating to each necessary part of the plan clearly defined duties and organic functions to be discharged. Organizations or parts thereof become standard when all involved business conditions positively determine the necessity for functional delegation of responsibility. Financial restrictions may, to an involved concern, retard or apparently forever prohibit the realization of standard organization, but the principles are elementary and all mill operations can with no great effort be made much better than they are by adhering to the principles of standardization.

No operating mill executive or superintendent can alone and without an enormous amount of help through organization and council maintain a high operating efficiency under standard organization and conditions. The superintendent can best serve his mill who so thoroughly knows his craft as to recognize his limitations and who fearlessly admits his inability to cope with all the difficulties of a rapid operating development. Such an admission honestly made is an indication of strength rather than weakness, for a mind fair enough to conduct a self-examination will supply the lacking elements of his plan from whatever source they may be secured.

No superintendent knows his whole mill as intimately as a specially delegated man who, by devoting his entire energy to each specific producing problem, becomes a specialized source of information. On the other hand, such a specializing assistant might possibly fail if put to the test of executive management and operation. The same principles of requisite elements apply to all executives other than the superintendent.

It is unfortunate for the young technically trained man that very much more than a majority of mill executives know but little of the possibilities of standardized organization and operation. It is true that much less than 100 per cent of

the present number of operating mills could easily supply the entire market if standards of operating efficiency and organization were fairly well developed. Reliable detailed knowledge of all conditions surrounding mill operation is absolutely necessary to a high order of success. Comparisons cannot be intelligently made without proper consideration for all conditions. Standardization of organization and operations will clearly indicate the necessity for supplying this requisite to success.

You must learn to both respect the ideas of other men and accept them in co-operation with your own. Contempt for the knowledge of others is a deplorable stumbling block to progress, but not as serious an outrage against progress as stubborn conceit and a self-sufficient contentment with average conditions and satisfaction in being an average man.

Technical knowledge however applied is but part of the service demanded by standardization. If specialization is devoted to the actual operations of converting raw cotton into a salable fabric or to the marketing of the finished product other elements must be supplied if 100 per cent institutional efficiency is to be realized. The operating mill executive or director of sales organization cannot alone even approximate a reasonable standard. Scientific accounting, cost and controlling methods are indispensable to maximum results, and that this element of organization is almost invariably terribly neglected opens a splendid field of work for the technically trained man. A keen knowledge of cotton processes is not alone sufficient to success in cotton manufacturing. Most superintendents and higher executives consider it so, however, and herein lies the cause for the low operating efficiency of the textile industry as a whole. Conventions of the trade, time hallowed inefficiency of organization and an abounding conceit fostered in the breast of a vast majority of operating men have held it down.

It have been brought closely in contact with many very able men in executive positions in cotton mills, and in this contact innumerable questions of doubt as to causes for low operating efficiency have been answered by the general condition of sublime ignorance of what other men could possibly do and what a small part they are playing in their self-sufficient turtle-like seclusion. These conditions, while exercising a tremendous handicap upon the textile industry, will bounteously spread the table of opportunity for young, keen, broad-minded and courageous men.

My advice to the young technical man is to avoid aspirations to executive mill offices. Do not make your ambition the acquiring of a superintendent's or even a treasurer's position only. Rather determine to supply an element of organiza-

tion which you will in time know to be lacking. Rise above obstacles and the interference of narrow minds. Do the unusual things to upset and defeat limiting or destructive customs of however long standing.

Cultivate courage to attack all problems from inside as well as out. Business politics are necessary to avoid the losses of commercial clashing and trade marketing warfare. Such politics are perfectly justified as a means of harmoniously smoothing the way to an end.

Ambition to be a commercial success is most worthy of praise. Such material success will come of itself if the young mill man standardizes himself and watches his own operating efficiency and his influence for good or evil on the institution of which he is only a part.

Demand your true worth, demonstrate it, fight for it. Pay no attention to the scoff and jokes of small minds; go ahead along the lines you believe to be right, profiting by advice and council from any and all sources. The innumerable problems of textile organization and operation offer magnificent opportunity for the exercise of your talents in many directions. The demand all along the line for reorganization of operating methods is too insistent to be much longer ignored by the whole industry.

Your reward will come from efficiency, both individual and your influence upon the collective efficiency or organization. The term efficiency, much abused, ill used and dragged in the mire, is well known and familiarly used by all men as the ratio of their producing condition to an accepted base.

The last four lines of Kipling's now very celebrated poem, to me, mean more and convey more than any exhaustive treatise upon the subject from an engineering source.

I offer them in conclusion:  
"If you can fill the unforgiving minute,

With sixty seconds' worth of distance run,

Yours is the Earth, and everything that's in it,

And what is more, you'll be a Man, my son.

#### Development of English Cotton Industry.

(Continued from Page 3.)

including the Philippines, Siam, China, Japan, and the Dutch East Indies, 1,120,807,000 yards; to Mediterranean markets, including Greece, Roumania, Turkey, and Egypt, 680,809,000 yards; to South American countries (Peru, Argentina, Brazil, Uruguay, and Chile), 424,337,000 yards; to other European countries (Denmark, Germany, Netherlands, Belgium, France, Switzerland, Portugal, and Italy), 340,627,000 yards; British South, West and East Africa, 231,149,000 yards; Australia, 211,073,000 yards; countries of North, West and East Africa, 179,626,000 yards; North America, 177,798,000 yards; Central America, Colombia, Venezuela, and British West Indies, 155,708,000 yards; Persia, 40,616,000 yards.

In only three of these groups was

there an increase over 1912, namely, in the Far East, in North America, and in India. The India and China business in cloths was enormous, while that in Japan and Persia fell off. That of Dutch East Indies largely increased, but trade in Turkey, Roumania, Morocco, and Egypt dropped back, and that with South America declined decidedly. Australia trade fell off, but Canadian gained. On the whole, the British exports gained more in the large markets than in the small.

The total exports of yarn to all countries in the last four years were as follows: 1910, 191,694,500 pounds; 1911, 223,857,000 pounds; 1912, 243,350,400 pounds; 1913, 210,175,500 pounds. Of course the home market is the predominating factor in the yarn trade, and the exports of yarn form a comparatively small proportion of the production of Lancashire. They are, however, an extremely important item, and the falling off last year of 33,000,000 pounds has had an unfavorable influence. This decrease in exports occurred mainly in the trade with Germany, Netherlands, Austria, Bulgaria, Roumania, Turkey, and Calcutta. Spinners of Egyptian cotton did exceedingly well and began 1914 very favorably. Fine carded Egyptian yarns did specially well. In view of the large increase in the looms in the last year or so, if the spinners have a poor year in 1914, the weavers must have a similar experience.—Consular Reports.

#### The Dyeing of Cotton in Dyeing Machines.

This is the title of a small volume of eighty-five pages, bound in cloth, containing details of a variety of methods found available for the dyeing cotton in mechanical appliances. In view of the constantly increasing interest in machine dyeing, the process described will prove of value to the practical dyer, and include the dyeing of loose cotton, sliver and roving, cheeses, cops, skein yarns and warps.

The volume also contains a number of valuable receipts obtained from practice, showing, besides the important machine dyeing process, the application of colors to warps on the beam and the dyeing of cheeses by the "froth" process.

A copy of the manual may be obtained by addressing any of the offices of the Cassella Color Co.

#### Why He Was in Doubt.

The Sunday school teacher had explained the familiar Bible story at length and then asked Tommy if he expected to be among the sheep or among the goats.

"I dunno," said Tommy doubtfully, "How's a feller to tell when his Maw calls him a lamb an' his Paw says he's a pesky kid?"—Ex.

"What is the reason," asked the gallant captain, of a young lady, "that men never kiss each other, while women waste a world of kisses on other feminine faces?"

"Because," was the reply, "men have something better to kiss and women haven't."

Extreme fastness in blues dyed upon cotton was not fully realized until the

## HYDRON BLUES

FASTER THAN INDIGO

were brought upon the market. Discriminating buyers of denims, chambrays and gingham specify

## HYDRON DYED

wherever fastness to washing, light and chlorine are desired.

**Cassella Color Company**  
New York

## CUTCH BROWNS

Superiority of Shade

Brown shades produced with Extract of Cutch have a fullness and richness of shade which cannot be equalled by any other coloring matter.

Consideration of this fact, in connection with the excellent fastness of Cutch should make it of interest to all dyers of cotton goods.

**American Dyewood Co.**

PHILADELPHIA

NEW YORK

BOSTON

## Cotton Spinning Examinations

Question.—Assuming you have a mixing of 12,000 lbs. of American cotton suitable for spinning 40's warp, what weight of finished roving would you expect to get? Give a list of the losses and their amount.

Answer.—The exact amount of waste would, of course, vary with such items as the skill and care of the workpeople, the condition and speeds of the machinery, and—at the scutchers and cards—with the ideas of the management; but all these would come within certain limits, and might work out approximately as stated below:—

Opener ..... 4 per cent  
Breaker Scutcher ..... 2 per cent  
Finisher Scutcher ..... 1½ per cent  
Carding Engine ..... 5 per cent  
Draw Frames ..... 1 per cent  
Fly Frames ..... 1½ per cent

Starting with the opener we may find the waste, and the amount of good cotton passed forward from each process by calculation as follows:—

(1)  $12000 \times 4$   
——— = 480 lbs. of waste at 100  
leaving 11,520 lbs. good cotton passed forward to card.

(2)  $11520 \times 5$   
——— = 576 lbs. of waste at 100  
leaving 10,944 lbs. of good sliver.

(3)  $10944 \times 1$   
——— = 109.44 lbs. of waste at 100  
draw frames, leaving 10,834.56 lbs. of good sliver.

(4)  $10834.56 \times 1.5$   
——— = 162.5 lbs. of waste at 100  
at the fly frames, leaving 10,672 lbs. of good rovings.

A point of particular importance in this connection is the difference between making the calculation in detail as above, and reducing it to one operation as below. The total percentages added up reach 14.75. We may reason this: If 100 lbs. of good cotton produces 17.75 per cent of waste, what will 12,000 lbs. produce?

$14.75 \times 12000$   
——— = 1,770 lbs.

This would only leave 10,230 lbs. of rovings, whereas the detailed calculation shows the weight of rovings to be 10,672 lbs.

Question.—Would it be possible for you to tell any of the wastes made in the foregoing question were due to bad packing or faulty ginning? If so, how would you proceed to determine this?

Answer.—The dilapidated condition of the wrapping or packing of very many of the bales of American when they reach this country is notorious. The actual weight of percentage of waste may, however, not attain a high figure as due to bad packing. At any rate an ordinary inspection of the bales of cotton when they reach the mill should usually disclose faults due to bad wrapping, such, for example, as staining and dirtying of the cotton. So far we are alluding only to the packing or covering of the cotton bales. It is quite possible for cotton

to be falsely or fraudulently packed, or damaged, apart from the question of wrapping, or to rank as unmerchantable cotton, and by the usual contract rules such cotton may be claimed for by the purchaser at the value of the sound cotton at the date of return. Falsely packed cotton may have distinct excess of the tare, or portions of inferior cotton may be included in the bales; the tare excesses being evidenced by weighing after taking off, while expert examination of the bales after opening may disclose other faults. Gin-cul cotton is perhaps not as easily detected as false packing, but may be suspected by extra cleanliness of small samples, by a distinct tendency to curl, or by samples breaking too easily between the fingers and thumbs. Naturally its presence will be manifested in the mill by increased waste, worse spinning, and weaker yarn, when present in large quantity. The spinner may make his claims for falsely packed cotton through his buying broker.

Question.—Assuming you have to design a blowing room for producing 60,000 lbs. of finished laps per week of 55 1-2 hours, from American cotton, give a list of the machines you would use, and state the number of laps each machine would have to produce, the laps being 12 ozs. per yard, and 36 lbs. in weight.

Answer.—We will assume we are intending to spin a good quality 50's carded yarn average from very good American cotton, and we desire to keep our blowing room machinery well employed. It might be found a convenient arrangement to use two openers followed by four single scutchers, and no intermediate or breaker scutchers being employed. The openers might each contain a large cylindrical or porcupine beater followed by a three-blade scutcher beater, and if any difficulty was experienced in the two openers keeping up with the production they could be run well up to time at the week-end, or we could resort to the somewhat extreme practice of doffing the laps without allowing the machine to stop. We will assume each full scutcher laps to weigh 12 ozs., and remember that 60,000 lbs. weight of laps is required from the scutchers.

With four scutchers producing a total of 60,000 lbs. each scutcher would produce 15,000 lbs.

$15,000 \div 36 = 416.6$  laps, or, say, 417 laps from each scutcher. It may be added that some firms might prefer to work the machines more easily, and use more of them, say three openers at 20,000 lbs. each per week. For the ordinary American cotton some spinners would use two Crighton openers. For moderate American cotton some spinners would use both breaker and finisher scutcher.

Question.—Assuming you have to provide the requisite number of cards to deal with the 60,000 lbs. of laps mentioned in the previous question, and to produce slivers of .16 hank, how many cards would you install? At what speed would you run the doffers, and what

CLEAN FLOORS MEANS LOWEST FIRE RISK  
SPECIAL  
**SAVOGRAN** 1 pound makes 2 gallons Jelly or soft soap.  
Soft Soap Powder In this way barrel lasts twice as long.  
Prices and further details on request.  
ALSO REGULAR WHITE STAR SAVOGRAN IF PREFERRED  
**INDIA ALKALI WORKS,** Boston, Mass.

**Our Spinning Rings** SINGLE OR DOUBLE FLANGE  
START EASIEST, RUN SMOOTHEST, WEAR LONGEST  
**Pawtucket Spinning Ring Co.**  
CENTRAL FALLS, R. I.

**THE SEYDEL MFG. COMPANY**  
JERSEY CITY, N. J.



Sizings and Finishings FOR ALL TEXTILES Soaps and Softeners

**A. KLIPSTEIN & COMPANY**

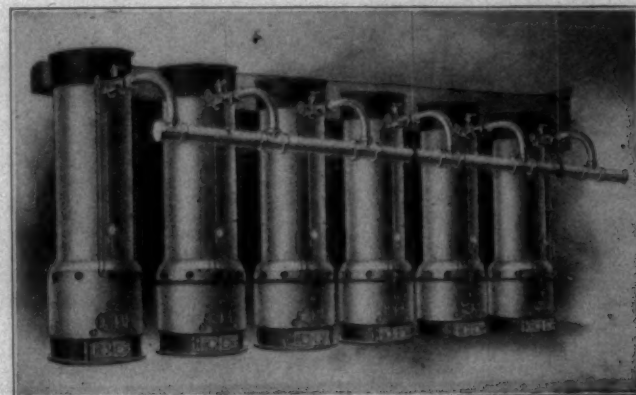
644-52 Greenwich St., NEW YORK

Southern Office: Commercial National Bank Bldg, Charlotte

**DYESTUFFS and CHEMICALS**

SIZING, BLEACHING AND FINISHING MATERIALS  
FAST VAT DYES—INDIGO

## DILLON BOILERS



All DILLON BOILERS are built to meet Massachusetts Standard requirements and are certified to and are recorded in the State House at Boston.

INCLUDE HORIZONTAL, MANNING, STRAIGHT UP-RIGHT, SCOTCH MARINE AND LOCOMOTIVE TYPES.—KIERS, TANKS, STEAMERS, ETC.

**D. M. Dillon Steam Boiler Works**

Established 1870

Incorporated 1906

Fitchburg, Mass.

New York Office  
30 Church St.

Southern Representative  
J. S. COTHRAN, Charlotte, N. C.

# Complete Cotton Mill Equipment

## The Best Advice is Obtained from Specialists

### PICKING MACHINERY AND CARDS

POTTER & JOHNSTON MACHINE CO.  
PAWTUCKET, R. I.

### DRAWING AND ROVING MACHINERY

WOONSOCKET MACHINE & PRESS CO.  
WOONSOCKET, R. I.

### SPINNING AND TWISTING MACHINERY

FALES & JENKS MACHINE CO.  
PAWTUCKET, R. I.

### SPOOLING AND WINDING MACHINERY

EASTON & BURNHAM MACHINE CO.  
PAWTUCKET, R. I.

### WARPING AND BEAMING MACHINERY

T. C. ENTWISTLE CO.  
LOWELL, MASS.

### Southern Office

Independence Bldg., CHARLOTTE, N. C.

### Northern Office

Marshall Bldg., BOSTON, MASS.

weight of slivers would you expect to get?

Answer.—We will assume, as in previous answers, that very good American cotton is being used, and the average counts of spun yarn is about 50's carded. Each card may be set out to produce 500 lbs. per week of good sliver, and assumed to lose 6 per cent in waste of one kind or another. With 6 per cent loss the 60,000 lbs. of laps would produce a total weight of sliver as per following calculation:—

100 lbs. of laps gives 94 lbs. of sliver.

$$\therefore 100 : 60,000 :: 94 : ?$$

$$60000 \times 94$$

$$= 56,400 \text{ lbs. of sliver}$$

100 [from cards.

Taking each card at 500 lbs. production, we get number of cards as follows:—

$56,400 \div 500 = 112 \frac{4}{5}$ ths cards, or, say 113 cards as per calculation. To this number may be added three or four for stoppages due to stripping, grinding, repair, or other purposes. A 24 inch diameter doffer might make about 11 1-2 revolutions per minute under the conditions specified.

If we feed a 12 oz. lap, and deliver a 16 hank sliver, and allow 6 per cent waste loss, hank or counts of lap and the card draft might be obtained from the following calculations:—

(1) Divide the weight of one yard of lap reduced to grain into 8.33.  
 $437.5 \times 12 = 5250$  grains in 12 ounces.  
 $8.333 \div 5250 = .00158$  counts of lap.  
(a)  $.16 \div .00158 = 101.2$

$$101.2 \times 94$$

$$= 95.128 \text{ mechanical draft.}$$

100

For ordinary American cotton, and spinning 30's to 40's, the assumed production of 500 lbs. per card would be too low, and 650 lbs. to 700 lbs. would be nearer the mark. For rather lower counts many firms obtain 800 lbs. or more per card.

Question.—Describe the mechanism required on a loom to produce swivel fabrics. Explain the nature of swivel ornamentation and how it may easily be distinguished from extra weft or lappet spots. Name any facts detrimental to its adoption in cheap fabrics.

Answer.—The special parts required for swivel ornamentation consist of (a) a frame to carry a series of small shuttles in front of the sley cap; (b) parts for lowering and raising the shuttles to and from the level of the race board; and (c) parts for moving the shuttles through openings formed in the warp by the jacquard and harness. The frame is lowered and raised by means of a series of levers which are controlled by the jacquard, and the shuttles are usually moved by the aid of a long rack and a number of pinions which gear also with small racks formed on the rear of the shuttles. Thus when the long rack is drawn in one direction the shuttles are traversed from a holder on one side of the already lifted warp threads to a holder on the other side of the threads, gaps being left in the frame to permit of a shed being formed therein. For the

next figure shed the shuttles are returned to their original holders by the contrary movement of the long rack. After each movement of the figure shuttles the rack is lifted and one or more picks of weft are interwoven from an ordinary shuttle to form a ground fabric. Each figure or spot has its own separate shuttle, hence the figure weft can be interlaced only with the warp threads which form the sheds to receive it, so that there is consumed just the requisite amount required to form the figure. The latter can also be interlaced with the warp in any desired order since any warp thread—within the limits of the gaps mentioned above—can be lifted or left down by the harness. Swivel figures are themselves formed by extra weft, hence they cannot be distinguished from "extra weft," as named in the question. Probably, however, the examiner refers to extra weft spots formed by ordinary weaving. In this latter case the figure material either floats loosely from figure to figure, or is cut away round the edges of the latter. Swivel spots can be distinguished from lappet spots by the fact that the latter, being produced by extra warp threads, are secured in the cloth by the weft threads, whereas the former, being extra weft, are secured by the warp. The complicated mechanism and limited output of the loom, together with the fact that a jacquard and harness are against the production of a cheap fabric.

Question.—Explain the adaptability of single and double lift dobies for weaving gauze fabrics.

Show by sketches how the open and cross sheds are obtained, and mention the use of "easiers," "shakers," and top and bottom doups.

Answer.—In gauze and leno weaving it is essential that the crossing threads should be level with, or in the same place as, the crossed threads at the moment when the former are about to change from one side of the latter to the other. In single lift shedding all warp threads are of necessity brought to a common level after every passage of the shuttle, because there is only one lifting agent which must therefore return to its original position to enable a fresh selection of shafts to be made for the following shed. For this reason single lift shedding is more convenient for gauze and leno weaving than any other system of shedding. But machines of this type can only be run at low speeds, hence they are only used to a limited extent. Of double lift machines the most suitable are those which form a "centre" shed, i. e., which drop a shaft to the centre of the shed before taking it back for the following pick when it is required in the lifted position for successive picks. Now, in a gauze weave the doup or crossing ends are required to be above the weft, and the crossed ends below the weft, for every pick, so that it would be impossible to change the position of the crossing end with the ordinary arrangements. The difficulty is overcome by the addition of parts, which are known as "shakers," and which raise the shaft

(Continued on Page 9).

## About Sizol.

The Seydel Mfg. Co., of Jersey City, N. J., has sent the following circular to the trade.

"As manufacturers of the world-renowned SIZOL we sell you scientific advice resulting from years of chemical study.

Have you ever stopped to think that without SIZOL the automatic loom would not today reel off the production it does and that such a thing as running thirty looms, without even a helper, would be an impossible feat for a weaver!

"Ten years ago, when we started to make SIZOL, 90 per cent of the sizes were made of starch and talow, for the reason that there was nothing better at hand.

"Today 90 per cent of the sizes are made of starch and a chemical compound, in the great majority of cases this being SIZOL.

"This speaks volumes for the progress of SIZOL as the best help of the weaving industry and we wish you to look at your production sheets and tell us if you are satisfied.

"We love to hear SIZOL praised, but still more do we love to convince a 'Doubting Thomas' of the help we can extend to him on any class of material—from silk to prairie grass."

## Indigo Blue Cloth With Lighter Back.

For a long time dyers and printers of certain indigo styles have been in the habit of dyeing the backs lighter than the face. It is probable that this practice originated in the wish to economize the dye. Then it was claimed that the difference between the two sides was a proof that indigo had been used, and that, as indigo dyeings are not very fast to rubbing, this method gave some warranty against bleeding on to other fabrics.

When the older vat dyeing process is adopted, the back of the piece is lighter than the front, but is very unlevel and full of more or less dark-blue patches. In this method the pieces are dyed folded back to back, so that the indigo cannot impregnate the two sides alike. The results would seem failures to persons not accustomed to the process, but the cloth finds a ready market for export, although it is true that the market for it in Europe has fallen off greatly. Customers are beginning to require that

the back should be level as well as pale, and this result has been achieved.

The Schaab and Ribbert processes had no other object than to economize labor and accelerate production, giving to the reserve sufficient solidity to stand dyeing in a continuous vat. Schaab's patent is based on padding the pieces, printed with a reserve, with a thickened color containing carbonate of potash or caustic soda lye of 15° B., and then dyeing them in a continuous vat, scouring and rinsing as usual. In this way the reserve is hardened to the point of being able to resist the successive pressures to which it is subjected during dyeing. On the unreserved parts, the caustic soda exerts a mercerizing action, thus conferring on the cotton an increased affinity for dyes. These places will thus acquire the dark shade required, while the back will be method is just that of Tagliani applied to reserve styles by means of padding. It does not always give much difference in shade between the two sides, and the consumption of indigo is considerable.

In the Ribbert process the cotton is prepared with glucose printed with a reserve of copper and lead salts, padded with indigo and caustic soda, steamed for 17 to 20 seconds, with a very wet steam, free from air, and dyed in the continuous vat. This is the Schlieper and Baum process used with a reserve. Owing to the quantity of indigo fixed by the steaming, the front and back show a greater difference than with the Schaab method. As has been remarked, these processes, while giving a level back, lighter than the face, were principally intended to permit dyeing in the continuous vat. Nevertheless, they require constant watchfulness, and do not always give the same results, so that it is doubtful if they are regularly used even by the patentees.

The writer has devised the following method. The well-bleached pieces are dyed a light shade in the continuous vat. This finishes them, so far as the back is concerned. The face is then printed with a discharge reserve, and then padded with Modern Violet. For very fine designs, better results were obtained by padding with the blue first, and printing with the reserve afterwards. The discharge used is a chlorate prussiate one, as it acts equally on the dyed indigo and the padded blue.

The following is the recipe, which

can be varied according to the basis of the continuous vat:—

10 lbs. Light Modern Violet.  
10 lbs. Light Modern Violet.  
5 lbs. Modern Blue CVI,  
3 gal. water,  
10 lbs. chromium acetate 24° B.,  
15 lbs tannin (1:1),  
15 lbs. Coeruleine print'g color

The recipe for the Coeruleine color is as follows:—

94 lbs. Coeruleine powder.  
5 lbs. bisulphite of soda.  
50 gal. water.  
1,050 lbs. thickening,  
100 lbs. acetate of chrome 24° B.

This color fixes rapidly, and reserves with a good white. After seven to eight minutes' steaming, the goods are passed through a bath of bichromate of soda, rinsed and soaped. The results are very fast to rubbing, washing and light, and look exactly as if they had been dyed solely with indigo. The white has naturally not the plasticity of that obtained with lead salt reserves, but, on the other hand, it keeps its white during the finishing operations, which, unfortunately, whites on a ground of indigo do not always do.

The contrast between the two sides of the piece is excellent, and the color is perfectly level on the back.—Translated by Textile Colorist from Revue General des Matieres Colorantes.

## Anthracene Green.

Anthracene Direct Green B is a new product especially adapted to the dyeing of bluish tones of green on raw wool, slubbing, yarn, and piecegoods, besides being available for Vigoreux printing. This dye is claimed to be particularly fast to washing, carbonizing and decatizing, and appears to be well suited for use on men's and women's goods, inasmuch as neither cotton or artificial silk shots are stained.

Supplement No. 54 just issued by the Cassella Color Company fully describes Anthracene Direct Green B besides showing a series of eight dyeings, and no doubt a copy may be obtained upon request.

## His Benevolence.

"Good little boy," purred the benevolent old gentleman. "I saw your kind act, though you didn't know I saw it. I saw you give your nice big apple to your little friend, and I noticed from your cheerful manner that you rejoiced in your generous deed."

## IT IS THE GARLAND STANDARD OF INSPECTION

That means a  
*Perfect*  
*Loom*  
*Harness*

The final inspection which each one of our loom harnesses receives when finished is so thorough and critical that every harness which we send out may be depended upon as being as near perfect as it is possible to make it.

GARLAND  
MFG. CO.



Saco, Maine

"You bet," returned the angelic one, with a seraphic smile; "but I jest wish I could see him bite into it. I took out all the inside and filled it up with mustard and red pepper."—Ex.

# W. H. BIGELOW

AGENTS FOR

## ASHWORTH BROTHERS

### Tempered and Side Ground Card Clothing

Tops Reclothed. Lickerins Rewound. Cotton Mill Machinery Repaired.

12 to 18 West 4th St., Charlotte, N. C.

240 River Street, Greenville, S. C.

127 Central Avenue, Atlanta, Ga.

## DISCUSSIONS BY PRACTICAL MEN

### Temperature of Mills.

Editor:

Any one who is actively engaged in cotton manufacturing in the South knows that air cooling as well as moistening is needed today. There are weave rooms all over the South in which the temperature ranges from 93° to 100°, and in the majority of spinning rooms the temperature runs 100° to 108°. Under such conditions the vitality of the help is diminished and their efficiency greatly decreased. With such temperatures the windows have to be opened to allow a little air to circulate with the result that the relative humidity drops to such a low point that the work runs bad. This added to the other troubles puts the mills in a rather bad plight. Jack.

### Watchful Waiting to Uncle Silas.

Editor:

I want a few words in regard to Uncle Silas' article in the issue of last week, in which he said he did not misquote me and quoted a part of my article to justify himself. The part of the paragraph that he quoted in order to prove that I said that some spinners run their back rolls faster than their middle ones is as follows:

"Everybody that knows anything about spinning, knows that when the roving winds around the middle roll, that the back roll is delivering it faster than the middle roll is collecting it."

Well Uncle Silas, why did you stop your little nephew from reading before he finished? If you had let him finish it, would have read like this:

"Everybody that knows anything about spinning knows that when the roving winds around the middle roll that the back roll is delivering it faster than the middle roll is collecting it, and the cause is in the middle roll alone. Either the bottom or top roll is out of order and should be looked after at once."

I then went on and stated some of the defects that would cause this. Why Uncle Silas, I can take the Bible and prove that there is no God by reading a part of it and leaving a part of it off, but we all know that a drowning man will clutch at a straw. Now your theory as to why cut staple does not cause the roving to wind around the middle roll in previous processes sounds good to a man who does not do his own thinking, and like the drowning man is always willing to clutch at straws. To the man that uses his own think-tank it does not sound reasonable at all.

Listen, your theory is that it does not wind around the middle roll in the carding because it has more stock to carry it. Now Uncle Silas, if your theory is correct, would not there be more short staple too, and therefore cause the same defect in



Alonzo Her,  
Greenville, S. C.

Recently elected members of the Board of Governors of the Southern Textile Association.



Robert F. Bowe,  
Greenville, S. C.

the carding that you claim it will cause in the spinning?

I will close now in order that I may not try your patience and that of the good editor who is so kind as to give us a page in his valuable paper for our benefit. I will again ask you to play fair and take "square deal" for your motto, as I have always done. I am a spinner also, and have never worked in the card room a day in my life, but I like to see all departments get a square deal.

Watchful Waiting.

### The Second Man's Duties on Lappers, Cards and Drawing.

Editor:

In giving the second man's duties on the lappers, cards and drawing, I will start at the lapper. First of all is proper oiling. The lapper should be oiled all over every day, and the fast running parts twice a day. The second man should see that this is done. For good results the beater boxes should be wiped off morning and noon. What I mean is inside the casing where the beater runs. The second hand should watch his evener belt racks and see that they act promptly. The belt should be endless. I find that they give better satisfaction for the short turns they have to make. The fan suction should be closely watched and cleaned out twice a day. The second hand should also watch the lapper tenders to prevent the loger head from breaking and the lap pins from binding. This can be prevented by seeing that no extra waste is tied on, or that no belt dressing is put on the brake as this will cause loger heads and lap pins to break and bend. I find for setting gears, if you set them about 2-3 they last longer and give better satisfaction. Keep a good watch for belt cutting, for the lapper hands will say that they have a belt that needs cutting, and

when you cut it and leave, nine times out of ten, they will come back and say that the bearing on a beater is burning up and when you find the cam, it is the one that you cut.

Now I will have something to say about the card. This is a very important piece of machinery and should have a great deal of attention. Here you will find that if the work is not done accurately, that it cannot be mended. The grinder should watch the settings very closely and see that the jam nuts are good and tight. When he moves one end right and then leaves it for you, you will find that if you move one end, it will work on the other, either on or off. He should watch the cone boxes carefully for a wrecked cone box is very unsatisfactory. Boxes should have proper oiling. I find that non-fluid oil is best for cone boxes. I have known grinders to walk around rattling boxes all day even when the overseer called their attention to it. I have seen grinders who would get on the box pulleys with their feet and tighten the bands so tight that it would take a steam engine to move them. If your cones are true, this is not necessary, if they are not it will make them bind and harder to pull, and therefore cause bad boxes.

Now some one will say that he does not see how he can run his job with nothing to keep it up with. It is true that some mills are a little backward about supplies, but you can hardly blame them. The grinder can take the eccentric on the cone box and if he had it as accurate, how long will it last. Take the upright shaft from the table to the card head and see how often you have to change worn gears on this shaft. Gears on this shaft ought to last for years, but still you have to change one every week or two. Next time you have a worn-out gear, examine the calen-

dar roller shaft and see if it is true with the upright shaft. Most of the trouble is found right here. Now about the setting. Different overseers have different ideas about setting. I am on hosiery yarns, making from 8s to 20s and I set my nats to a 9. When I say 9, I mean 9 and not say 9 and set to a 12. I set my doffer to cylinder to a 7, my feed plate to a 10, which I find gives good results for all numbers. I set mote knives as close as I can get them without rubbing. I have seen flyings after you take them out of the card that had to have the white cotton picked from them. This is due to poor setting of the creels. They should be watched as closely as the clothing on the doffer and have the proper settings at all times.

### Cotton Spinning Examinations.

(Continued from Page 7.)

carrying the crossed ends to bring the latter to the centre of the shed at the moment when the descending doup ends arrive at the same point; whereupon the crossing can easily be effected. Open shed dobbies are not easily adopted to the circumstances, because it is not possible to "shake" the crossed ends a full shed, hence they are not often used for gauze weaving. One method of adopting them consists of using two jacks for the doup shaft, and pegging one to rise and the other to fall. This has the effect of reducing the motion to the principle of the centre shed. It should be noted that "shakers" are only required when cross and open sheds have to follow each other on consecutive picks. In bottom doup shedding open sheds are obtained by lifting the doup and the back standard; and crossed sheds by lifting the doup and doup standard. With top douts open sheds have the doup standard and the back shaft which carries crossed ends lifted, while the cross sheds have both back shafts lifted. "Easers" or "slackeners" are used to move the doup ends forward at the time when a cross shed is being formed to ease the strain upon the warp. "Shakers" have already been mentioned. Douts are placed above the warp in top doup weaving, and below in bottom doup weaving. The selection of one or other is chiefly determined by the style of pattern and the shedding motion to be used. With inside tappets top douts are easiest to arrange, and the cloth is woven face side up. With outside tappets and dobbies bottom douts are chiefly used because there is less lifting of the warp in the cross shed, but the cloth is then woven side up.

### The Kindest Action.

"Papa," said the daughter, "Jack is coming tonight to ask your consent to our marriage. Be kind to him, won't you?"

"Certainly, my child," said the stern parent; "I'll do him the kindest act I can. I'll tell him he can't have you."—Ex.

# SOUTHERN TEXTILE BULLETIN

Offices: Room 912 Realty Building, Charlotte, N. C.

Published Every Thursday By  
Clark Publishing Company

DAVID CLARK

Managing Editor

D. H. HILL, Jr.

Associate Editor

## SUBSCRIPTION.

One year, payable in advance.....	\$1.00
Other countries in Postal Union.....	2.00
Single copies.....	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

## ADVERTISING

Advertising rates furnished upon application.

Address all communications and make all drafts, checks and money orders payable to the Clark Publishing Company, Charlotte, N. C.

Entered as second class matter March 2nd, 1911, at the post office at Charlotte, N. C., under the Act of March 3d, 1879.

THURSDAY, JULY 16

### Textile Work Course.

During the past session the Textile Department of the A. & M. College at Raleigh, N. C., operated what is known as a "work course" for needy young men from the mills. In this course the men were arranged in pairs and were given jobs in the mills at Raleigh. One man would work in the mill one week while his partner was in the textile school and the next week his partner would fill the place in the mill while he attended the textile school.

By this system young men who have no funds are able to get a textile education as the amount they earn at the mill is about enough for their expenses at the textile school.

This plan worked very well during the past and we are advised by Prof. Thos. Nelson, Director of the Textile Department, West Raleigh, N. C., that it will be in effect next session if a sufficient number apply.

It is a splendid opportunity for ambitious young men of limited means to obtain a textile education and we hope that a large number will take advantage of the offer.

### Southern Cotton Mills.

Every six months we publish a new edition of Clark's Directory of Southern Cotton Mills and when we compile the statistics contained therein we find that there has been a steady and continual growth of the industry.

The statistics which we give always include mills under construction and also mills that are idle and are therefore slightly in excess of the actual number of spindles and looms in actual operation, but in each issue there is a marked increase in the total.

The July 1st, 1914, edition of Clark's Directory of Southern Cotton Mills shows that including the mills and additions under construction the following are the correct statistics for the South:

Cotton mills .....	765
Capital stock .....	\$217,743,000
Number of spindles.....	13,416,952
Number of looms.....	281,468

These figures show that the Southern cotton mills are capitalized at \$16.23 per spindle as against an estimated cost of \$21.00 per

spindle and are under, rather than over, capitalized.

North Carolina continues to lead in number of mills, having 317 as against 157 in South Carolina and 139 in Georgia, but South Carolina leads in number of spindles, having 4,745,528 as against 3,913,466 in North Carolina.

The average number of spindles per mill in the four leading states are as follows:

	Ave. No. Spindles
Alabama .....	17,400
Georgia .....	16,200
North Carolina .....	12,000
South Carolina .....	30,000

The number of new mills has been greater during the past six months than during any similar period in the past two years, but the policy of increasing the size of existing plant rather than launching new corporations continues to be in effect and most of the new mills, while separate corporations, will be operated by the management of old mills. Judging by the first six months of 1914 we estimate that the increase of spindle in the South during 1914 will not fall far short of 500,000 and if business improves in the fall that figure may be exceeded.

### Southern Cotton Mill Statistics of July 1st, 1914.

	No. Mills	Cap. St.	Spindles	Looms
Alabama .....	64	\$18,525,000	1,110,842	20,000
Arkansas .....	2	215,000	14,362	164
Georgia .....	139	36,220,000	2,256,988	43,303
Kentucky .....	8	1,665,000	98,308	1,357
Louisiana .....	4	1,900,000	81,500	2,304
Mississippi .....	19	2,823,000	187,672	4,841
Missouri .....	3	750,000	42,152	988
North Carolina .....	317	58,650,000	3,913,466	64,738
Oklahoma .....	1	227,000	5,712	.....
South Carolina .....	157	75,975,000	4,745,528	114,827
Tennessee .....	21	5,143,000	316,444	11,747
Texas .....	17	2,725,000	124,692	3,195
Virginia .....	13	12,725,000	519,286	14,004
Total .....	765	\$217,543,000	13,416,952	281,468

### The Textile Machinery Exhibit.

Fiber and Fabric of Boston, Mass., recently had the following to say editorially:

"North Carolina cotton manufacturers and the Southern Textile Association, each in convention assembled, passed resolutions favorable to a textile machinery exhibition in Charlotte next April.

The action of the two southern organizations complicates matters in one sense and clears the situation on the other hand, as it is quite frequently the case, that a divided movement fails in accomplishing the desired result.

When the Atlanta boomers at the textile show presented their facts and arguments for a show in their city next year, there seemed reasonable grounds for a careful consideration of the matter, with consider-

able sentiment in favor of Atlanta. Then there was not thought but what there was unanimous approval of the big Southern city.

But the action of the North Carolina associations presents the matter in an entirely different light, and basing an opinion on the number of mills within easy distance, we should say that Charlotte was more entitled to a show than is Atlanta. The probable outcome will be, that neither place will be chosen, and that the next textile show under the auspices of the Textile Exhibitors Association will be held in Boston in 1916."

Our Boston friends seem to be misinformed. The Southern Textile Association did not endorse the holding of the Textile Machinery exhibit in Charlotte or at any specified point, but they did strongly endorse the holding of a machinery exhibit in the South.

There is no quarrel between Atlanta and Charlotte over the textile machinery exhibit. Both want it, but both are primarily interested in securing the exhibit for the South and which ever loses will boost the exhibit when it is held at the other city. The manufacturers of machinery and supplies know that the

South is the best market for their products and they know that an exhibit in the South will be of more real benefit to them than one in Boston.

The South wants a textile machinery exhibit and one should be held in 1915, at either Atlanta or Charlotte.

### Far East Markets For Cotton Textiles.

The Bureau of Foreign and Domestic Commerce of the Department of Commerce is about to send one of its commercial agents, Ralph M. Odell, an expert on cotton textile matters, to the Orient, India, Straits Settlements, Java, Sumatra, French Indo-China, Australia and New Zealand, to study markets for cotton textiles with a view to promoting the interests of that important industry. Mr. Odell will probably sail within three or four weeks.

## ALBANY GREASE

Lubricates mill machinery without waste      Send for samples and cup and try it

YOUR DEALER SELLS  
**Albany Grease**

**ALBANY LUBRICATING CO.**  
706-10 Washington Street, New York

NO CHARGES—  
Write now

**CARDS,  
DRAWING,**

**COTTON  
MILL MACHINERY**

**SPINNING  
FRAMES,**

**MASON MACHINE WORKS**

TAUNTON, MASS.

EDWIN HOWARD, Southern Agent  
Greenville, S. C.

**COMBERS,  
LAP MACHINES.**

**MULES,  
LOOMS.**

H. G. Leigh has been transferred from overseer of weaving to overseer of sample department at the Alta Vista (Va.) Mills.

H. R. Cain has resigned as slasher tender at the Loray Mills, Gastonia, N. C., and moved to Asheville, N. C.

Alex Hutson of Selma, Ala., has accepted the position of second hand in card room at the Buck Creek Cotton Mills, Siluria, Ala.

G. W. Huffinger, of Danville, Va., is now overhauling spinning at the German-American Mills, Draper, N. C.

H. B. Burns has resigned as general overseer at the Fort Valley, (Ga.) Cotton Mills and will engage in other business.

Joe Matthews has resigned as overseer of carding and spinning at the Glenola Mill, Eufaula, Ala., and accepted a position with the Dawson Cotton Oil Mill, Dawson, Ga.

Daniel Schofield, overseer of carding at the Lawrenceville (Ga.) Mfg. Co., was called to Atlanta last week by the death of his mother-in-law.

Ralph Hamilton, formerly overseer of carding at the Lowe Mills, Huntsville, Ala., has accepted a similar position at the Appalachian Mills, Knoxville, Tenn.

J. H. Neal has resigned his position as overhauler of spinning at the Loray Mills, Gastonia, N. C., to become second hand in spinning at Cherokee Falls, S. C.

W. B. Sinclair has resigned as second hand in finishing at the Manetta Mills, Lando, S. C., to accept a similar position at the Jackson Mills, Monroe, N. C.

N. L. Whitten has resigned as overseer of weaving at Pelham, Ga., to accept a similar position at the Harmony Grove Mills, Commerce, Ga.

W. F. Campbell has resigned as overseer of spinning at the Dixie Mills, Mooresville, N. C., to accept a similar position at the Nokomis Mills, Lexington, N. C.

D. R. Warlick has resigned as overseer of carding at the Bellwill Mills, Wilmington, N. C., and has moved to Kinston, N. C. His employees presented him with a handsome present before leaving.

Jas. Airy has resigned as overseer of weaving at the Eagle and Phenix Mills, Columbus, Ga., to accept a similar position at the Alta Vista (Va.) Cotton Mill.

J. A. Schrinisher has resigned as second hand in carding at the Buck Creek Mills, Siluria, Ala., to accept a similar position at the Eva Jane Mills, Sylacauga, Ala.

Z. M. Floyd, superintendent of the Pelham (Ga.) Mills, has been on an automobile trip to Prattville, Ala., while the mill was idle for a week's vacation.

G. P. Pruett has resigned as overseer of cloth room at the Merimack Mills, Huntsville, Ala., to accept a similar position at the Monaghan Mills, Greenville, S. C.

C. Seitz, the secretary and treasurer of The Arabol Mfg. Co., New York, who has been in Europe for some time, is expected back about August 1.

#### OVERFLOW PERSONALS PAGE 16.

##### Peck Mfg. Co.,

##### Warrenton, N. C.

D. M. Crump ..... Superintendent  
W. M. Woodleaf ..... Carder  
M. C. Ewing ..... Spinner  
E. L. Knight ..... Master Mechanic

##### Walton Mill,

##### Monroe, Ga.

W. G. McDonald ..... Superintendent  
H. A. Coker ..... Carder  
Jess Coker ..... Spinner  
R. R. McCraw ..... Weaver  
P. H. Hutchins ..... Cloth Room  
W. L. Duren ..... Master Mechanic

##### Wallace Mill,

##### Jonesville, S. C.

G. H. Fairbanks ..... Superintendent  
J. H. Vonhollen ..... Carder  
L. N. Chandler ..... Spinner  
J. E. Meyers ..... Weaver and Cloth Rm  
J. A. Kirkpatrick ..... Master Mechanic

##### Lockhart Mills,

##### Lockhart, S. C.

J. W. Ahmuty ..... Superintendent  
L. H. Hallman ..... Carder  
J. E. Lattimore ..... Spinner  
L. D. Lockman ..... Weaver  
W. A. Ross ..... Cloth Room  
I. M. Burdett ..... Master Mechanic

##### Union Mills,

##### Union, S. C.

H. K. Drew ..... Gen. Supt.  
O. A. Sullivan ..... Carder  
R. H. Williams ..... Spinner  
J. B. Williams ..... Weaver  
W. C. Culberson ..... Cloth Room  
W. L. West ..... Master Mechanic

## PERSONAL NEWS

J. P. Eller has resigned as second hand in weaving at Alta Vista, Va.

B. F. Spears has resigned as superintendent of Marlboro Mill No. 4, McColl, S. C.

G. C. Guin of Winston-Salem, N. C., has accepted a position at the Erlanger Mills, Lexington, N. C.

John Curwen of Demopolis, Ala., has accepted a position at Siluria, Ala.

Chas. Doby of Lexington, N. C., has accepted a position with the Wiscassett Mills, Albemarle, N. C.

Lindsay Loftin has accepted a position with the Wiscassett Mills, Albemarle, N. C.

C. D. Long, of Anniston, Ala., has accepted the position of time-keeper at the Lowe Mill, Huntsville, Ala.

— — — Flowers has been promoted to second hand in spinning at the Pomona Mill, Greensboro, N. C.

N. W. Garner has resigned as overseer of weaving at the Cowpens (S. C.) Mfg. Co.

E. W. Netherland has resigned as overseer of carding and spinning at the Fort Mill (S. C.) Mfg. Co. No. 2.

W. I. Henson has resigned as overseer of one of the card rooms at Schoolfield, Va.

F. R. Shepard is now overhauling spinning at the Cannon Mills, Concord, N. C.

Jas. Rhodes has resigned as second hand in carding at the Eva Jane Mills, Siluria, Ala.

T. J. Burrell has resigned as slasher tender at Victor Mills, Greer, S. C., to accept a similar position at the Loray Mills, Gastonia, N. C.

J. E. Mahafee has resigned as overseer of cloth room at the Caraleigh Mills, Raleigh, N. C., and moved to Union, S. C.

R. F. Coble, superintendent of the Atlas, Huss and Osage Mills, Bessemer City, N. C., was on a pleasure trip to Edgemont, N. C., last week.

A. F. Voigt, the vice-president of the Arabol Mfg. Co., N. Y. City, returned on the steamer Imperator last week from an extended trip to Europe.

L. A. Tatum of Laurinburg, N. C., has been elected president and treasurer of the Dillon Mills at Dillon and Hamer, S. C.

C. B. Armstrong, president of the Armstrong and other mills at Gastonia, N. C., is spending his vacation at Blowing Rock, N. C.

W. C. Hamrick, treasurer of the Hamrick and Limestone Mills, Gaffney, S. C., is spending his vacation at Blowing Rock, N. C.

J. T. Davis, formerly of Liberty, S. C., has accepted the position of overseer of weaving at the Cowpens (S. C.) Mfg. Co.

L. W. King of Rock Hill, S. C., has accepted the position of overseer of carding and spinning at the Fort Mill (S. C.) Mfg. Co. No. 2.

R. M. Threadgill has been promoted from second hand to overseer of the cloth room at the Eva Jane Mills, Sylacauga, Ala.

T. E. Hendrix of Union, S. C., has accepted the position of overseer of weaving at the Enterprise (Ala.) Cotton Mills.

J. F. MacEnroe, assistant treasurer of the Ware Shoals (S. C.) Mfg. Co., has gone North on a three weeks vacation.

J. E. Simpson, formerly overseer of weaving at Lindale, Ga., is now engaged in the motion picture business at Gastonia, N. C.

Joe P. Hassell of Hillsboro, N. C., has accepted the position of overseer of cloth room at the Caraleigh Mills, Raleigh, N. C.

Will Pettigrew has been promoted from second hand to overseer of spinning at the Pomona Mill, Greensboro, N. C.

Geo. W. Dearman has been transferred from master mechanic to overseer of spinning at the Dixie Mills, Mooresville, N. C.

Wm. V. Dilling has resigned his position in the office of Leroy Springs at Lancaster, S. C., to accept one at the Kershaw (S. C.) Cotton Mills.

W. L. Smith has resigned his position at the Columbus (Ga.) Mfg. Co., to become second hand in weaving at the Eva Jane Mill, Sylacauga, Ala.

## MILL NEWS ITEMS OF INTEREST

**Tulsa, Okla.**—Tulsa Commercial Club is negotiating for construction and equipment of linen mill.

**Lanett, Ala.**—It is reported that the Lanett Cotton Mills will install considerable additional machinery.

**Griffin, Ga.**—The Rushton Cotton Mills will increase their equipment by the addition of 5,000 spindles.

**Lindale, Ga.**—A small fire was discovered in the cloth room of the Massachusetts Mills Friday night at 8:30 o'clock. The watchman found the smoldering fire, and turned in the alarm. The damages was about \$75.

**Dillon, S. C.**—The vacancy caused by the resignation of J. W. Lanford as president and treasurer of the Dillon Mills Co., has been filled by the election of L. A. Tatum of Laurinburg, N. C. Mr. Tatum was formerly bookkeeper for the Dillon Mills.

**Birmingham, Ala.**—The C. L. Seat Shirt Co. is the name of a new shirt factory to be started here. It will manufacture shirts for the consumer, selling directly to the wearer, and will employ about 15 people.

**Greenville, S. C.**—All the cotton mills in Greenville and vicinity will close down Friday, July 31, and resume operations August 10. This is the annual 10-day vacation and it will doubtless prove a pleasant one for the operatives, who will indulge in picnic, baseball and other outdoor attractions during the time.

**Rock Hill, S. C.**—The transformer house of the Southern Power Co. at the Manchester Mill was struck by lightning during the storm last week and put out of commission. This means that the Manchester Mill and the Highland Park Mill had to close down, and will probably remain shut down for a week or ten days. The period of the shut-down depends entirely upon the ability of the Southern Power Company to repair the damage and start the current working.

**Goldville, S. C.**—Shand Engineering Company of Columbia, has furnished the plans for the enlargement of the Banna Manufacturing company's cotton mill at Goldville, construction of which is progressing. A brick building 144 by 25 feet, and ten cottages for operatives are being erected at a cost of about \$10,000 and upwards of \$30,000 is being expended on the purchase of preparatory machinery, including 4,096 spindles, 96 looms and five cards. The new floor space will be about 5,000 square feet. The Banna Mill now employs 120 operatives and its mechanical equipment comprises 10,128 spindles and 256 looms.

**Columbia City, Ind.**—Operations started on construction of foundation of the plant for Columbia Woolen Mills, and work will be hurried as much as possible.

**Frostburg, Md.**—The Parker Hosiery Mills will increase their production by installing 10 additional knitting machines, and will later increase this number to 40.

**Augusta, Ga.**—According to a report the Augusta factory will close down on July 1st, to remain closed for a period of 30 days.

It is stated that it is customary at this time of the year for cotton goods manufacturing plants to experience a slump in business but this year the slump has been greater than is commonly the case, and it is on account of this drop-off in business that the Augusta factory will not run for a month, after the 16th.

**Martinsburg, W. Va.**—Receivers were appointed by Judge R. W. Dailey at Romey for the Crawford Woolen Mills Company of Martinsburg. The liabilities are placed at \$100,000, with assets of about the same amount. The mill has been in operation twenty years and employs 300 persons. The receivers are G. M. Bower, H. H. Emmert, Martinsburg, and H. P. McCormick, Winchester.

**Hagerstown, Md.**—The local mills of the Antietam Knitting Co., manufacturers of men's half hose, were practically destroyed early Saturday morning by lightning and fire. The loss is said to be about \$75,000. The best part covered by insurance. Two hundred modern machines had recently been installed in the buildings, and most of these were destroyed.

The Antietam Knitting Co. operates a branch plant at Hancock, Md. The Windsor Knitting Mills, also of this place, it will be recalled, suffered a heavy loss in similar manner several weeks ago.

**Waxhaw, N. C.**—The Rodman-Heath Cotton Mill is preparing to put a ginny plant in operation this fall. The old merchantile building, formerly used as a company

store for the mill operatives, which has been vacant for several years is being torn away, except the mill office part of the building. The street at that point will be straightened and the gin house will be erected just opposite the office.

Machinery of the latest improved type has been bought and work on the building will be pushed forward rapidly. It is expected to have the ginny ready for the early fall cotton.

### The Ivey Mills.

Quite a number of improvements have been made around the Ivey Mill, Hickory, N. C., both in the mill and the village within the past few months, and according to the plans already laid down there will be many changes within the next month or so. The mill has recently been painted on the inside from top to bottom, and all the wood-work on the outside been retouched or repainted. All the machinery has been overhauled and put in perfect running order, and with these additions is now able to do the same amount of work with less labor.

All the cottages in the village have been repainted and each one will be painted during the fall. When the mill was first built a plot of ground, which is now a nice oak grove was left for the purpose of a park, and the company expects to begin work this fall towards making this a place of amusement and recreation for the operatives. A band stand and pavillion will be built in the center of the park and walks leading to it will be laid out through the grove and grass planted in the vacant spots. It is the intention of the company to encourage the raising of flowers next year by offering some lucrative prizes to the ones who produce the best varieties.

H. W. Warner, who was for a number of years with the Chadwick-Hoskins Company of Charlotte, superintendent of the Ivey Mill, is planning ahead for other improvements. One of the things put down for attention as early as the funds will permit is a deep well from which water will be piped through the village.

### Walter M. Sharpless Dead.

Walter M. Sharpless, senior member of the well-known cotton yarn house of W. M. and F. W. Sharpless, 126 Chestnut street, Philadelphia, died on Sunday, July 5th, at his summer home at Media, Pa. Death was due to heart disease.

Mr. Sharpless had not been active in the business for the last ten years, but he was widely and very favorably known in the South.

### W. P. Barnes Recovered.

The many friends of W. P. Barnes, superintendent of the Griffin (Ga.) Mills, will be glad to learn that he has recovered from the wounds received when he was severely cut by a mill operative a few weeks ago.

It was reported at the time that he was mortally injured but fortunately his wounds were not so serious and he has recovered sufficiently to return to his office.

### Jas. McDonald Dead.

Jas. McDonald, one of the oldest cotton manufacturers in the South, died at Charlotte last week.

He has been engaged in cotton manufacturing practically all of his life and died at the ripe age of 77 years.

Not only was he a cotton manufacturer himself, but he raised his sons in the business. W. J. McDonald is superintendent of the Walton Mills, Monroe, Ga. C. D. McDonald is overseer of spinning at the Durham Hosiery Mills, Durham, N. C., and J. R. McDonald is superintendent of the Charlotte Cotton Fiber Co., Charlotte, N. C.

Jas. McDonald was a man of the highest character and his many friends will regret to learn of his death.

### A Few Optimists.

R. B. Knox, secretary and treasurer of the Newton and Glyde Cotton Mills, tells us that, although there has been some curtailment of production this summer, business has been better than in any summer since 1906. The weaving business has been much better than they have ever known it since the mills put in looms. He looks for a very prosperous year during the next 12 months.—Newton (N. C.) Enterprise.

Much capital has been made of reported curtailment in the cotton industry, and woeful prognostications of the closing of mills for more or less extended periods have had more publicity than the facts of the case would warrant. A review of the situation shows the present condition of the major part of our mills to be much better than these prophets of gloom would have us believe. Curtailment is not sufficiently uncom-

We will be pleased to send to the one responsible for weave room costs a sample of the shuttle we believe the most economical for you to use. Simply send us a worn shuttle and a full filling bobbin such as you are now using. The worn shuttle will explain your needs to us quite clearly. We'll write you fully explaining our shuttle. This service is free. You assume no obligations.

WRITE TODAY  
**SHAMBO SHUTTLE COMPANY**  
Woonsocket, R. I.

Thursday, July 16, 1914.

mon as to be worthy of intended notice unless it develops to an abnormal extent, which is not the case at present. In fact it is not so prevalent nor is it as great as his occurred at this season in any one of the past six years.—Cotton and Wool Reporter.

Washington, July 9.—Optimistic views of business conditions were presented to President Wilson today by Henry Ford, the Detroit manufacturer, during an hour's conference at the White House. Mr. Ford told the President he saw no evidences of any sort of business depression, psychological or otherwise, and said that in his opinion business was getting better all the time.

"The only trouble is," Mr. Ford said, "that some people seem pessimistic. If everyone would only cheer up and attend to their business, this calamity talk would stop immediately."

#### Considerations Influencing the Counts of Travelers.

Yarn spun from combed cotton, all other circumstances being equal, necessitates the use of travelers two to four counts heavier than for carded yarns. The working of harsh stapled cotton should also be accompanied by employing heavier travelers than for softer cotton. Ring frames provided with separators, which limit the amount of ballooning, demand lighter travelers, depending to some extent on the type of separator employed. This fact is of superimportance in connection with soft-twisted and fine yarns. Lighter travelers are also required for yarns spun from heavily drafted roving. In some instances coarse yarns spun from cotton of poor quality require lighter travelers than do finer counts spun from very good cotton. All conditions being equal, such as counts, turns per inch, etc., heavier travelers are necessary for Egyptian and Sea Island yarns than for Indian and American yarns. Large and excessive roller drafts at the ring frame call for lighter travelers. Generally speaking, yarn spun from double roving will stand a heavier traveler. When selecting travelers for ring frames driven at a constant speed, the tension exerted on the yarn by the travelers must not exceed that which prevents an excessive number of ends breaking down when winding on the minimum diameter of the bobbin. Therefore, a lighter traveler may be requisite in some cases compared to a ring frame driven at a variable speed. The blending of old and new crops of cotton can unavoidably cause an alteration in either the turns per inch or the counts of traveler, as also will cotton when unsatisfactorily dealt with in the processes preceding the spinning department.



### Spinners Run More Sides

The following letter was written to one of our foremen:

We have now had the Turbo-Humidifier in operation nearly three months, and I take pleasure in testifying to the efficiency of the same.

We have had no trouble whatever with the system during this time, and your own personal work upon the job was most excellent.

I have had experience with nearly all of the standard types of humidifiers, but the Turbo in my opinion excels at every point. I firmly believe that it is a direct saving of nearly 3 per cent. in the matter of invisible waste, besides enabling us to use stock that heretofore was unavailable and valueless. Our spinners run more sides, thereby increasing the individual earnings. The Turbo practically cares for itself and needs little or no attention, after being properly adjusted.

THE G. M. PARKS CO.

Fitchburg, Mass.

Southern Office Commercial Building, Charlotte, N. C.

J. S. COTHRAN, Manager.

Consequently upon a mill having found, in their opinion, a reliable maker of satisfactory travelers, it is decided advisable to purchase regularly all requirements in travelers from that maker. When, however, the same mill buys travelers from two or more makers, steps ought to be taken to ascertain whether each maker adopts the same method of arriving at the counts. By weighing, say, 100 travelers of each count on grain scales, the weights of different makers can be easily obtained and compared. If the weight of equal counts varies with the different makers, the extent of variation requires remembering when deciding on the counts of traveler to employ in connection with spinning any certain counts of yarn. The principal traveler makers appear to be more universal than formerly in deciding the counts of travelers. The actual weights of 100 travellers of various counts are indicated in Table A. At least two of the principal makers of travelers adopt about these weights.

Previous to placing new travelers on the rings the retarding effect of the very slight "burr" on the traveler points can be somewhat neutralized by immersing the travelers for a few hours in very light oil. For this purpose a shallow tray is very serviceable. Then drain off the oil. To reduce the undesirable practice of some operatives placing travelers in their mouth, a mixture of very light oil and a little quantity of some harmless unpalatable ingredient may be employed. Each ring frame ought to have a separate supply of travelers, so that the spinner will have no need to obtain new travelers from any other source than the frame the travelers are required for. Spinners ought not to be permitted to pick travelers up from the floor and use them.—Textile Manufacturer of Manchester, Eng.

#### R. M. Miller, Jr., Offers Scholarship.

R. M. Miller, Jr., president of the Elizabeth Cotton Mills, has established a scholarship in the Textile Department of the A. & M. College, at West Raleigh, N. C. This scholarship, which covers tuition, will be available to some young man who desires a textile education, but has no funds.

#### Untranslatable.

Mr. Brown had just registered and was about to turn away when the hotel clerk asked:

"Beg pardon, sir, but what is your name?"

"Name?" said the indignant guest. "Don't you see my signature there on the register?"

"Yes, sir," answered the clerk calmly. "That is what aroused my curiosity."—Ex.

THE "STANDARD"

## BALING PRESS

FOR

## COTTON MILLS

AS MADE BY

### Boomer & Boschert Press Co.



No. 104 West Water St.  
SYRACUSE, N. Y.

SEND FOR CATALOG

## AMERICAN MOISTENING COMPANY

BOSTON, MASSACHUSETTS

WILLIAM FIRTH, President

### THE ONLY PERFECT SYSTEM OF AIR MOISTENING

COMINS SECTIONAL HUMIDIFIER

JOHN HILL Southern Representative, Third Nat. Bank Building, ATLANTA, GEORGIA

FRANK B. COMINS, Vice-Pres. & Treas.

## Cotton Goods Report

New York.—Staple cotton goods held firm last week, and the outlook for the future is better. Offers on goods for delivery through to the end of the year were numerous, and while some buyers are continuing their efforts to secure concessions, others are covering at current levels, after having tested the price situation.

The leading gingham houses now have their spring line ready and a great deal of interest is being shown in the openings. The question of prices on these lines is the subject of much discussion, and it is generally conceded that prices will not be named when the lines open, but will be kept back until later. Staple prints have been moving steadily. It is said that a great deal of the business of the larger printing companies is going over to percales. Business which heretofore dealt with staple prints now on fancy prints, the past season having seen a large variety of these goods. This could hardly be called a gingham year, but it is thought that the larger houses have secured a normal volume of trade. Bleached sheetings of well known brands have a satisfactory advance business and prices show an upward tendency. Other goods of this kind are firm. The market on coarse colored cottons, such as denims and ticking, is firm though quiet.

Trading remained quiet in the Fall River print cloth market last week, although there was some increase in the total volume of sales. The increased business came as a result of a slight shading of prices. The total sales were estimated at about 125,000, about one-third of these being spots. The sales of the week were made up mostly of wide and medium width goods, spots and nearby deliveries. The deliveries were generally for August and September. Concessions amounting to a sixteenth of a cent were granted on odd styles in general. Most of the trading during last week was done on a concession basis. Standard goods have not been sold at reductions, though little business has been done on them.

Cloth has been in better demand for printing and converting than for a month or more past. Buyers find that prices are pretty stiff and while they are bidding freely they are unable to secure 4-yard 80 squares at 6 3-4c. Some sales at 6 13-16c. have been made for late delivery and more will be bought at that figure if there are any sellers. Most mills want 6 7-8c. On 68x72s the market is now firm at 5 5-8c. and sales have been made in fair volume for late delivery. On 38 1-2 inch 64x60s the market is very firm at 4 7-8c. for anything this side of October, and some mills are turning down business at a slightly higher figure. On 60x48s the market is now firm with most mills asking 4 5-8c. and some sales reported at 4 5-16c. for late delivery. Narrow goods

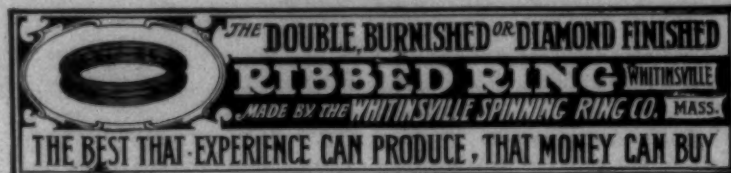
are quiet. On 40-inch plain combed yarn fabrics the market seems to be hardening as many looms are pretty well employed through September.

Prices on cotton goods were quoted in New York last week as follows:

Print cloth 28-in std 3 3-4	—
28-in, 64x60s	3 1-2
4-yard, 80x80s	6 7-8
Gray goods, 39-in, 68x72s	6 7-8
Gray gds, 39-in, 68x72s	5 3-4
38 1-2-in. std	5 3-10
Brown drills, std	8
Sheetings, So. std	8
3-yard	7 1-4
4-yard, 58x60s	6
4-yard, 48x48s	5 3-8
4 1-2-yd, 44x44s	5 3-4
5-yard, 48x52s	5
Denims, 9-ounce	14
stark, 9-ounce, duck	15 1-2
Hartford, 1-oz, 40-in	—
duck	16 1-2
Ticking, 8-ounce	13 1-2
Standard, fancy print	5 1-4
Standard, gingham	6 1-4
Fine dress gingham	9
Kid finished cambrics	4 1-2

### Hester's Weekly Statement.

In sight for week	32,000
In sight same seven days	—
last year	27,000
In sight for the month	43,000
In sight same date last year	39,000
In sight for season	14,347,000
In sight same date last year	13,637,000
Port receipts for season	10,359,000
Port receipts same date last year	9,833,000
Overland to mills and Canada for season	1,146,000
Overland same date last year	1,078,000
Southern mill takings for season	2,782,000
Southern same date last year	2,634,000
Interior stocks in excess of Sept. 1	60,000
Interior last year	91,000
Foreign exports for week	23,000
Foreign same seven days last year	26,000
Foreign for season	8,762,000
Foreign same date last year	8,368,000
Northern spinners' takings and Canada for week	8,000
Northern same seven days last year	15,000
Northern for season	2,493,000
Northern to same date last year	2,532,000
Total since Sept. 1	13,376,000
Statement of world's visible supply:	—
Total visible this week	3,690,000
Total visible last week	3,846,000
Total visible same date last year	3,095,000
Of this the total American this week	2,015,000
Of this the total American last week	2,128,000
Of this the total American last year	1,742,000



### WE MAKE THE BEST

Spinning and Twisting **TRAVELERS** Of Every Description

AMOS M. BOWEN, Treas.  
Providence, R. I.

Southern Representative  
MATTHIAS OUSLEY, Jr.  
Box 126, Greenville, S. C.

### GRINNELL WILLIS & COMPANY

44-46 Leonard Street, New York

### SELLING AGENTS

BROWN AND BLEACHED COTTON GOODS FOR HOME EXPORT MARKETS

### RICHARD A. BLYTHE

(INCORPORATED)

Cotton Yarns Mercerized and Natural

ALL NUMBERS

505-506 Mariner and Merchant Building

PHILADELPHIA, PA.

## The Desirability of the South

as the place to manufacture cotton goods is illustrated in the increase of 67% quoted by census department. We can offer attractive situations for those desiring to enter this field.

### J. A. PRIDE

General Industrial Agent, Seaboard Air Line Railway

NORFOLK, VIRGINIA.

### IMPROVED INMAN AUTOMATIC BANDING MACHINES

MANUFACTURED BY

COLE BROTHERS

PAWTUCKET, R. I.



The only automatic machine in the world for making loop bands for spinning frames. Superior quality of bands without any cost of making. All bands exactly alike and no stretch of bands after they are put on. Saves child labor.

Also Beaming Machine to beam on to slasher beams.

## The Yarn Market

Philadelphia.—The yarn market was quiet last week, this being in a large measure to the fact that many mills took advantage of the Fourth of July holiday to close their plants for a week or more in order to make needed repairs and to take stock. There was not much demand for yarn and prices were irregular.

A carded yarn hosiery manufacturer said that he could see nothing in the situation to cause alarm. Dealers are working for business for September and later delivery and several sales were reported made on the basis of 19 1-2 cents for 10s Southern frame spun cones. Sales for quick delivery were made on the basis of 20 and 20 1-2 cents for 10s. Eastern frame spun carded cones, sold on the basis of 20 1-2 and 21 1-2 cents for 10s, for quick delivery.

Combed yarns, with single and two-ply are quiet. Hosiery manufacturers, who use single combed yarns, are buying only enough to fill in their needs.

Two-ply combed yarns are quoted and sold, in small quantities, at a variety of prices: 40-2 sold for 37 to 41 cents; 50-2 on cones, 42 to 45 cents; 60-2 on cones, 47 to 51 cents, and 70-2 on cones, 68 cents. While a good many hosiery men say mercerized yarns are dead there is a demand for them on spots. Makers of artificial silk hosiery buy 50-1 to 80-1 mercerized on cones for backing. Sales of 50-1 were made for 51 and 52 cents; 60-1 sold for 60 cents, and 80-1 sold for 82 cents. A sale of 60-2 mercerized on cones was made for 59 cents, and some dealers are quoting 63 cents. There is a scarcity of imported 100-2 and finer mercerized. Some knitters of mercerized goods are experimenting with carded yarn mercerized for cheap lines of mercerized hosiery.

### Southern Single Skeins.

8s	18	—19 1-2
10s	19	—19 1-2
12s	19	—20
14s	20	—20 1-2
16s	20 1-2	—21
20s	21 1-2	—
26s	23	—
30s	25	—25 1-2

### Southern Two-Ply Skeins.

4s to 8s	18 1-2	—19 1-2
10s	19	—19 1-2
12s	19	—20
14s	20	—20 1-2
16s	20 1-2	—21
20s	22	—
24s	23	—23 1-2
26s	23 1-2	—24
30s	25	—
40s	29	—29 1-2
50s	35 1-2	—36
60s	45	—45 1-2

### Carpet and Upholstery Yarn in Skeins.

9-4 slack	19 1-2
-----------	--------

9-4 slack	19 1-2	—20
9-4 slack	19	—19 1-2

### Southern Single Warps:

8s	19	—19 1-2
10s	19	—20
12s	20	—20 1-2
14s	20	—21
16s	20 1-2	—21 1-2
20s	21 1-2	—22
24s	23	—23 1-2
26s	23 1-2	—24
30s	25	—
40s	29	—

### Southern Two-Ply Warps.

8s	18 1-2	—19 1-2
10s	19 1-2	—20
12s	20	—20 1-2
14s	21	—21 1-2
16s	21 1-2	—22
20s	22	—22 1-2
24s	23 1-2	—
26s	24	—
30s	25	—25 1-2
40s	29 1-2	—30
50s	36	—

### Southern Frame Spun Yarn on Cone:

8s	19	—19 1-2
10s	20	—21
12s	20 1-2	—21 1-2
14s	21	—22
16s	21 1-2	—22 1-2
18s	22	—23
20s	22 1-2	—23 1-2
22s	23	—23 3-4
24s	23 1-2	—24 1-2
26s	24 1-2	—25
30s	25 1-2	—26 1-2

### Single Combed Peeler Skeins:

50s	37	—
22s	23 1-2	—24
24s	24	—24 1-2
26s	24 1-2	—25
30s	26	—
22s	25	—25 1-2
24s	25 1-2	—26
26s	26	—26 1-2
30s	27	—27 1-2

### Two-Ply Carder Peeler in Skeins:

24s	24	—
26s	24 1-2	—25
30s	25 1-2	—26
36s	28 1-2	—29
40s	31	—32
50s	37	—
60s	45	—46

### Two-Ply Combed Peeler Skeins:

20s	28 1-2	—29
24s	30 1-2	—31
30s	32	—33
40s	36	—40
50s	43	—45
60s	47	—54
70s	58	—63
80s	67	—71

"The woman threw herself into the river," read the teacher. "Her husband rushed to the bank. Now, tell me why her husband rushed to the bank?" "To get the insurance money," yelled the class. Cincinnati Enquirer.

## A. M. Law & Co. F. C. Abbott & Co.

Spartanburg, S. C.

Charlotte, N. C.

BROKERS

BROKERS

Dealers in Mill Stocks and other Southern Securities

Southern Mill Stocks, Bank Stocks

N. C. State Bonds, N. C. Rail-

road Stock and Other High Grade Securities

### South Carolina and Georgia Mill Stocks.

	Bid	Asked
Abbeville Cot. Mills, S. C.	100	
Aiken Mfg. Co., S. C.	35	
Am. Spin. Co., S. C.	150	153
Anderson Cot. M., S. C. pfd	90	
Aragon Mills, S. C.	65	
Arcadia Mills, S. C.	100	
Arkwright Mills, S. C.	100	
Augusta Factory, Ga.	35	
Avondale Mills, Ala.	115	120
Anderson Cot. M., com.	20	
Belton Cot. Mills, S. C.	100	105
Brandon Mills, S. C.	70	
Brogan Mills, S. C.	61	
Calhoun Mills, S. C.	51	
Cannon Mfg. Co., N. C.	120	110
Capital Cot. Mills, S. C.	85	
Chiquola Mills, S. C.	105	115
Clifton Mfg. Co. com.	97	
Clifton Mfg. Co., pfd.	100	
Clinton Cot. Mills, S. C.	125	
Courtenay Mfg. Co., S. C.	55	No
Columbus Mfg. Co., Ga.	82 1/2	
Cox Mfg. Co., S. C.		
Chiquola Mills, pfd.	78	85
D. E. Converse Co., S. C.	85	
Dallas Mfg. Co., Ala.	110	
Darlington Mfg. Co., S. C.	65	
Drayton Mills, S. C.	30	
Eagle & Phenix M., Ga.	72	
Easley Cot. Mills, S. C.	175	
Enoree Mfg. Co., S. C.	20	
Enoree Mfg. Co., pfd.	100	
Enterprise Mfg. Co., Ga.	65	70
Exposition Cot. Mills, Ga.	125	
Fairfield Cot. Mills, S. C.	70	
Gaffney Mfg. Co.	55	57 1/2
Gainesville C. M., Ga. com.	75	
Glenwood Mills, S. C.	80	
Glenn-Lowry M. Co., S. C.	101	
Glenn-L. M. Co., S. C., pte	72 1/4	
Gluck	68	
Granby Cot. Mills, S. C.		
Granby C. M., S. C., pfd		
Graniteville M. Co., S. C.	100	No
Greenwood Cot. M., S. C.	49	
Grendel Mills, S. C.	97	
Hamrick Mills, S. C.	102	
Hartsville C. M., S. C.	175	
Henrietta Mills, N. C.	116	
Inman Mills, S. C.	101	
Inman Mills, S. C., pfd.	100	
Jackson Mills, S. C.	90	101
King, John P. Mfg. Co., Ga.	80	
Lancaster C. M., S. C.	130	
Lancaster C. M., S. C., pfd	97	
Langley Mfg. Co., S. C.	70	75
Laurens Cot. Mills, S. C.	100	
Limestone C. M., S. C.	125	
Lockhart Mills, S. C.	125	
Marlboro Mill	60	
Mills Mfg. Co., S. C.	110	
Molloy Mfg. Co., S. C.	90	
Monarch Cot. Mills, S. C.	90	
Monarch Cot. Mills, S. C.	115	
Newberry Cot. Mills, S. C.	112	
Ninety-Six Mills, S. C.	150	
Norris Cot. Mills, S. C.	100	
Olympia Mills, S. C. 1 pfd		
Orangeburg M. Co., pfd	90	
Orr Cot. Mills, S. C.	61	

### North Carolina Mill Stocks.

	Bid	Asked
Arista		
Alphine, pfd	100	
Avon		
Brown, com	115	
Brown, pfd	100	
Cabarrus	120	
Cannon	150	
Chadwick-Hoskins, pfd.	100	
Chadwick-Hoskins, com.		
Chronicle	160	
Cliffside	190	195
Dakota	125	
Dixie	60	
Entwistle	100	115
Efird	134 1/2	
Erwin, com.	155	
Erwin, pfd	120	105
Flint Mill	150	234
Gibson	109	110
Gray Mfg. Co	130	
Henrietta	117	
Highland Park	190	
Highland Park, pfd.	102	
Imperial	130	
Kesler	140	
Loray Mfg. Co., pfd.	85	
Loray, com	10	
Lowell	200	
Majestic	150	
Paola	70	
Patterson	129	
Raleigh	85	
Vance	70	
Washington		
Wiscassett	140	
Ottaray Mills, S. C.		
Oconee, com	100	
Oconee, pfd	100&int.	
Pacolet Com.	103	
Pacolet Mfg. Co., pfd.	100&int.	
Parker, Com.	6	
Parker, pfd.	30	
Parker Cot. M. Co., guar	85	90
Pelzer Mfg. Co., S. C.	115	
Pickens Cot. Mills, S. C.	95	100
Piedmont Mfg. Co., S. C.	140	145
Poe, F. W. Mfg. Co., S. C.	92	
Richland C. M., pfd.		
Riverside Mills, S. C.	25	
Roanoke Mills, N. C.	140	160
Saxon Mills	116	
Sibley Mfg. Co., Ga.	45	52
Spartan Mills	116	
Toxaway Mills, S. C.		
Tucapau Mills, S. C.	280	
Union-Buffalo M. 1st pfd	35	
Union-Buffalo, 2nd.	3	5
Victor Mfg. Co., S. C.		
Ware Shoals M. Co., S. C.	70	
Warren Mfg. Co., S. C.	61	
Warren Mfg. Co., S. C., pfd	35	
Whitney Mfg. Co., S. C.	95	
Williamston Mills, S. C.	95	
Woodruff Cot. M., S. C.	95	100
Woodside Cot. M., S. C.		
Williamston Cot. M., pfd	55	

## Personal Items

Julius Hughes has resigned as overseer of cloth room at the Monaghan Mills, Greenville, S. C.

J. N. Vincent of Tallassee, Ala., has accepted the position of overseer of cloth room at the Merri-mack Mills, Huntsville, Ala.

J. E. Amerson has resigned his position with the Wellington Mills, Macon, Ga., to become second hand in spinning at the Eva Jane Mills, Sylacauga, Ala.

J. C. Tiddy has resigned as overseer of spinning at the Nokomis Mills, Lexington, N. C., and returned to his former position as the overseer of spinning at the Amazon Mills, Thomasville, N. C.

Geo. W. Turnipseed has not accepted the position of overseer of carding at the Woodlawn Mills, Anniston, Ala., as we stated through error last week.

### R. R. Woodside is Slashed by Weaver.

R. R. Woodside boss weaver at the Watts Cotton Mills, Laurens, S. C., was badly used up Tuesday in an altercation with one of his weavers, Charley Penland, who slashed Woodside with a pocket knife, inflicting a number of ugly and painful wounds in the head and neck before the men could be separated. In all Woodside was cut in eight or ten places, one of the most serious wounds being the severing of an artery in his arm. The trouble is said to have resulted from "docking" Penland.

Charged with assault and battery with intent to kill, Penland was arrested and jailed.

### Cotton Consumption For June.

Washington, July 14—Cotton consumed during June was 445,635 bales, exclusive of linters, compared with 441,157 in June last year, the Census Bureau announced today. Consumption for the 10 months ending June 30 was 4,745,390 bales, against 4,588,729 last year.

## OLD SHUTTLES MADE NEW

Why throw your Old Shuttles away when you can save money by having them refilled at the

## WESTMINSTER SHUTTLE WORKS

WESTMINSTER, S. C.

## SPINNING RINGS Best Quality Guaranteed

Also Manufacturers of Drop Wires

The Connecticut Mill Supply Co.,

Torrington, Connecticut

Southern Representatives, PEARSON & RAMSAUR, Greenville, S. C.

## HIGH GRADE MILL BRUSHES



Special Brushes Made to Order

All Kinds of Brushes Repair

## D. D. FELTON BRUSH CO.

ATLANTA, GA.

W. H. Monty, Pres. and Treas. W. H. Hutchins, V-Pres. and Sec'y.

## SOUTHERN SPINDLE AND FLYER COMPANY

CHARLOTTE, N. C.

MANUFACTURERS, OVERHAULERS and REPAIRERS OF COTTON MILL MACHINERY

DID YOU EVER STOP TO THINK THAT WE MANUFACTURE FLYER PRESSERS RIGHT HERE IN CHARLOTTE? This means your orders are filled promptly. We can save you money in three different ways. First, on the price. Second on the express or parcel post charges. Third, by making prompt shipments, thus putting your spindles to running when they are stopped for pressers. Isn't this worth considering? Many of our largest orders come from the North. All we ask is a trial.

SATISFACTION GUARANTEED. WRITE FOR PRICES.

## SOLUBLE SIZING TALLOW



THIS PREPARATION is simply raw beef tallow made soluble. In view of the fact that raw tallow will not dissolve and hence does not combine with starches, we herein offer an article that avoids these objectionable features. Soluble Sizing Tallow dissolves and combines readily with all starches and acts as a most valuable softening agent. Users of this article will avoid the danger of mildewed warps and also the disagreeable odor of Raw Tallow in the goods. In short, an excellent softening agent.

## Arabol Manufacturing Company

100 William Street, NEW YORK

CAMERON MacRAE, Southern Agent, Charlotte, N. C.

Cotton on hand June 30, in manufacturing establishments was 1,154,407 bales compared with 1,203,470 a year ago, and in independent warehouses 630,729 compared with 609,360 a year ago.

Exports during June were 295,539 bales against 223,921 last year, and for the 10 months 8,767,371 against 8,403,084 a year ago.

Imports were 47,010 bales against 8,019 last year, and for the 10 months 227,413 against 210,364 a year ago.

Cotton spindles active during June numbered 30,938,752 against 30,046,121 a year ago.

Linters consumed during June was 26,954 bales against 25,355 a year ago; and for the 10 months 258,155 bales against 251,629 last year; on hand in manufacturing establishments 88,819 bales against 81,845 a year ago, and in independent warehouses 33,185 against 40,877 a year ago.

Linters exported during June was 23,409 bales and for the 10 months 249,966 bales.

### Brightening the Home.

"How's the baby?" inquired the neighbor, of the new father.

"Fine," said the proud parent.

"Don't you find that a baby brightens up a household wonderfully?" pursued his friend.

"Yes," said the parent with a sigh; "we have the gas going most of the night now"—Ex.

### The North Carolina College of Agriculture and Mechanic Arts.

This State Industrial College offers strong courses in Agriculture, Horticulture, Stock-raising, Dairying, Poultry, Veterinary Medicine; in Civil, Electrical, and Mechanical Engineering; in Chemistry and Dyeing; in Cotton Manufacturing, and in Agricultural teaching. Four year courses. Two and one year Courses in Agriculture and in Machine Shop Work. Faculty of 64 men; 738 students; 25 buildings; excellent equipment and laboratories for each department. On July 9th County Superintendents conduct entrance examinations at each county seat. For catalogue write,

E. B. OWEN, Registrar,  
West Raleigh, N. C.

Adv.

# WE HOLD OUR TRADE

By maintaining Quality and Uniformity.

By giving the Trade a Sizing that is ALL SIZING and absolutely no water used in its manufacture. Our Chief Aim is to please our customers and produce better results for less money.

We have confidence enough in our goods to send sample barrel on approval, freight paid, and a practical man to demonstrate our claims.

## THE KEEVER BROS. CO.,

## Manufacturers of "K. B." SPECIAL SIZING.

289 Market Street, NEWARK, N. J.

## Want Department

### Want Advertisements.

If you are needing men for any position or have second hand machinery, etc., to sell the want columns of the **Southern Textile Bulletin** affords the best medium for advertising the fact.

Advertisements placed with us reach all the mills and show results.

### Employment Bureau.

The Employment Bureau is a feature of the Southern Textile Bulletin and we have better facilities for placing men in Southern mills than any other journal.

The cost of joining our employment bureau is only \$1.00 and there is no other cost unless a position is secured, in which case a reasonable fee is charged.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern textile industry.

### Spinning Bands For Sale.

A better band made from good made on the small band machine. stock, for less money than can be Will deliver Spinning or Twister Bands, all automatically made, in 100-lb. lots at 23c. a pound. All bands guaranteed perfect.

Aragon Cotton Mills.  
Rock Hill, S. C.

WANT position as overseer of weaving. Prefer Draper job, but am expert on box looms and dobbies. Have run large rooms and always given satisfaction. Address 728.

WANT position as overseer of spinning or second hand in large room. 5 years as overseer. Age 36. Married. References from former employers. Address No. 729.

WANT position as superintendent of either yarn or weave mill on either white or colored work. Now employed as superintendent, but prefer more modern mill. Would not be interested at less than \$1,200 per year. Address No. 730.

WANT position as superintendent of small mill or overseer of weaving in large mill. Age 48. Married. 30 years experience on wide variety of goods. Now employed and can furnish line of good references. Address No. 731.

WANT position as sample room man or designer. Have had good experience on fancy and fine goods, both silk and cotton. Can furnish good references. Address No. 732.

WANT position as carder or spinner or both. Have had good experience in both rooms as overseer and can give satisfaction. Fine references. Address No. 733.

WANT position as overseer of carding. Now employed, but want larger room. Can furnish best of references. Address No. 734.

WANT position as roller coverer. 8 years experience. Am first-class roller coverer. Strictly sober. Steady worker. Can furnish good references. Address No. 735.

WANT position as overseer of weaving. Now employed but would like to change. Experience on both coarse and fine work. Good references. Address No. 736.

WANT position as superintendent. Besides having long experience as superintendent on both white and colored goods am expert designer. Now employed. Good references. Address No. 737.

WANT position as superintendent or overseer of large card room. 6 years as overseer of carding. 9 years superintendent. Experience on various classes of goods. Excellent references. Address No. 738.

WANT position as superintendent or overseer of spinning. Have had long experience in good mills and can furnish fine references. Address No. 739.

WANT position as master mechanic. Am a practical machinist and engineer of long experience. Can furnish the best of references. Address No. 740.

WANT position as overseer of spinning. Now employed but for good reasons wish to change. Have had long experience and can get results. Address No. 741.

WANT position as overseer of weaving. Now employed and giving satisfaction, but wish to change to more modern mill. Fine references. Address No. 742.

WANT position as superintendent of either spinning or weaving mills. Prefer white goods, but have experience on gingham and other colored goods. Fine reference. Address No. 743.

WANT position as superintendent or overseer of either spinning or weaving. Now employed but wish healthier location. Good references. Address No. 744.

WANT position as overseer of carding in medium to large size mill. Have many years experience on white and colored work, fine and coarse numbers. Married. On present job 7 years. Good references. Address No. 745.

WANT position as superintendent. Have had long experience and am now employed. Especially strong in carding department, but experienced in all. Address No. 746.

WANT position as overseer of weaving at not less than \$3.00 per day. Married. Temperate. Of good character. Experienced on plain and check work. References if desired. Address No. 747.

WANT position as superintendent or general manager. Have good experience on both white and colored goods and am good manager of help. Fine references. Address No. 748.

WANT position as carder in large mill, or carding and spinning in any size mill. Have long experience and have always made good. Now employed. Address No. 749.

WANT position as overseer of spinning. Have had long experience including 4 years as overhauler. Can give present employers as reference. Address No. 750.

WANT position as overseer of carding or spinning at not less than \$2.50 per day. Age 31. Sober. 15 years experience in carding and spinning. Can furnish good references. Address No. 751.

WANT position as overseer of spinning. Have had long experience, especially on market yarns and can furnish best of references as to character and ability. Address No. 752.

WANT position as overseer of carding. Now employed. Have run present job 3 years, and can furnish best of reference. Age 29. Have two hands for mill. Health of wife only reason for changing. Address No. 753.

WANT position as superintendent. Have had long experience on both coarse and fine yarns with special experience on hosiery yarns. Fine references from former employer. Address No. 754.

WANT position as overseer of weaving. Long experience on both white and colored goods and have had charge of large rooms. Can give last employer as reference. Address No. 755.

WANT position as superintendent. Long experience both as carder and superintendent on both yarn and weaving mills. Can give satisfactory references. Address No. 756.

WANT position as overseer of spinning. Have had long experience and handled large rooms successfully. Can furnish first-class references from former employers. Address No. 757.

WANT position as overseer of spinning at not less than \$3.00 per day. Have had experience in successful mills and can furnish fine references from former employers. Address No. 758.

WANT position as superintendent, overseer of spinning or traveling salesman. Have had long experience as overseer of large spinning rooms and can give former employers as reference. Address No. 759.

## PATENTS

### Trade marks and Copyrights

Send your business direct to Washington. Saves time and insure better service.

*Personal Attention Guaranteed*  
*30 Years Active Service*

**SIGGERS & SIGGERS**

*Patent Lawyers*

Suite 34 N. U. Washington D. C.

WANT position as carder or machinist. Now employed but prefer to change. Can give good references as to character and ability. Address No. 760.

WANT position as superintendent or overseer of weaving. Long experience and first-class references. Can get results. Address No. 761.

WANT position as overseer of weaving. Have had long experience both in the mill and erecting looms. Can furnish fine references. Address No. 762.

WANT position as master mechanic or engineer. Had 8 years experience in locomotive and marine work and cotton mill repair shops. Good references. Can change on short notice. Address No. 763.

WANT position as overseer of spinning and winding. 17 years experience in spinning and am now employed. Can furnish good references. Address No. 764.

WANT position as superintendent or overseer of weaving. Five years overseer of weaving, two years superintendent. Can furnish good references. Address No. 765.

WANT position as superintendent or manager. Am well educated and have had considerable practical experience. Now employed and can furnish fine references. Address No. 766.

WANT position as superintendent. Now employed but for good reasons wish to change. Special experience on hosiery yarns, both colored and white. Fine references from former employers. Address No. 767.

WANT position as overseer of carding and spinning in small mill or spinner in large mill at not less than \$3.00 per day. Age 35. Good character and habits. Long experience. Address No. 768.

WANT position as overseer of weaving. Have had long experience especially on colored and fancy goods. Can give former employers as reference. Address No. 769.

WANT position as superintendent of either yarn or weave mill or carder in large mill. Now employed, but want larger job. Good experience and references. Address No. 831.

WANT position as superintendent. Long experience as superintendent and am considered an A-1 carder. Now employed. Best of references. Address No. 770.

WANT position as superintendent, overseer weaving, or traveling salesman. Have had experience in such positions and can furnish good references. Address No. 771.

WANT position as superintendent or overseer of carding. Am now employed in large mill, but for good reasons prefer to change. Fine references. Address No. 772.

WANT position as overseer of weaving. Age 33. Now employed but have best of reasons for wanting to change. Can furnish good references. Address No. 773.

WANT position as overseer of cloth room 14 years experience as overseer and can handle product of any mill in South. Nothing less than \$3.00 per day considered. Address No. 774.

WANT position as superintendent or overseer of spinning. Long experience on both coarse and fine numbers and can furnish best of references. Address No. 775.

WANT position as overseer of weaving. Now employed as second hand on fancy fine goods. Can give good references from past and present employers. Address No. 776.

WANT position as superintendent or carder and spinner. 16 years experience in those positions and am now employed. Can furnish best of references. Address No. 777.

A HUSTLER for production wants job as overseer of weaving. 15 years experience on shirtings, drills and duck, can give first-class reference as to my ability to run and manage a weave room. In order to take a needed rest I resigned my position several months ago, and have been in the canvassing business since. Address No. 778.

WANT position as overseer of spinning. Age 42. Married. Strictly sober. Have long experience on both coarse and fine white and colored work. Address No. 779.

WANT position as overseer of carding or spinning or both. Age 41. Married; 20 years experience. 15 years overseer. Good references. Address No. 780.

WANT position as superintendent. Have had long experience on both coarse and fine goods and can furnish best of references as to character and ability. Address No. 781.

WANT position as superintendent or overseer of weaving or salesman for sizing compound. Have had long experience in the mill and as salesman and can furnish good references. Address No. 782.

WANT position as superintendent of either yarn or cloth mill. Am experienced on hosiery yarns. Competent and reliable. Can invest some capital in good proposition. Address No. 783.

WANT position as superintendent or carder and spinner. Have had long experience on both coarse and fine goods and can furnish good references. Address No. 784.

WANT position as superintendent or overseer of weaving. Experience on both white and colored goods and have always given satisfaction. Good references. Address No. 785.

WANT position as overseer of carding. Now employed but do not like present location. Long experience and good references. Address No. 786.

WANT position as superintendent. Am a Southerner, but have for some time been employed in Eastern mills. Have given satisfaction but prefer to return South. Have valuable experience. Address No. 787.

WANT position as superintendent or carder. Have had experience in as overseer of large card room, both North and South. Excellent references. Address No. 788.

WANT position as superintendent. Prefer mill on hosiery yarns, but would take hard yarn mill. Now employed and can furnish good references as to ability and character. Address No. 789.

WANT position as overseer of carding. Am experienced on both and fine numbers, white and colored. Prefer Georgia or South Carolina. Sober. Good manager of help. Satisfactory references. Address No. 790.

WANT position as superintendent or overseer of carding. Long experience. Now employed, but want larger mill. Good references. Address No. 791.

WANT position as overseer of weaving, finishing or cloth room. Long experience as weaver and am also expert cloth room and finisher man, including colored goods. Address No. 792.

WANT position as superintendent of yarn mill. Long practical experience on all classes of yarns from 4s to 180s. Also experience on automobile tire and similar fabrics. Fine references. Address No. 793.

WANT position as overseer of carding. Now employed and giving satisfaction, but prefer healthier location. Good references. Address No. 794.

WANT position as overseer of spinning or carding and spinning. Married and strictly sober. 16 years experience. Am also a technical graduate of the I. C. S. Nothing less than \$4.00 per day will interest me. References. Address No. 795.

WANT position as superintendent. Have had long experience, especially on hosiery yarns. Can furnish best of references from former employers. Address No. 796.

WANT position as superintendent of weaving or yarn mill of not less than 15,000 spindles. Now employed as superintendent, but want larger mill. Fine references. Address No. 797.

WANT position as overseer of large card room or assistant superintendent. Now employed as superintendent of small mill, but would change for larger job. Long experience and good references. Address No. 798.

WANT position as superintendent. Have had long experience and given satisfaction. Reason for changing better salary. Age 45. Married. Strictly sober. Experienced from ground up on both white and colored work. Address No. 799.

WANT position as overseer of weaving. Experienced on both white and colored work and on all makes of loom. Good references. Address No. 801.

WANT position as overseer of weaving. Am experienced overseer and also a good designer. Can furnish fine references. Address No. 802.

WANT position as overseer of spinning or carding and spinning. Now employed as overseer. Married. Age 27. Long experience. Good references. Address No. 803.

WANT position as overseer of carding and spinning. Have had long experience and am now employed. Can furnish good references. Address No. 804.

WANT position as superintendent of small mill or spinner in large mill. 13 years experience as overseer. Can furnish good references. Address No. 805.

WANT position as superintendent. Long experience, especially on fine combed yarns. Can furnish best of references from former employers. Address No. 806.

WANT position as superintendent or overseer weaving. Now employed and giving satisfaction, but prefer to change. Can furnish best of references. Have had long experience. Address No. 807.

WANT position as superintendent. Now employed as superintendent and am giving entire satisfaction, but prefer larger mill. My references are all that can be desired. Address No. 808.

WANT position as superintendent. Have had long experience both as carder and spinner and have been well trained. Am competent to handle mill and can give satisfaction. Address No. 809.

WANT position as superintendent or overseer of carding and assist-

ant superintendent. Graduate Ga. Tech. Age 27. Married. Want larger job. Good references. Address No. 810.

WANT a position as overseer of

carding in small room, or second hand in large one. Am now employed but want higher salary. Twenty-four years experience. Can amply furnish satisfactory references. Address No. 811.

WANT position as superintendent. Have had experience on both hosiery and hard yarns. Married. Sober. Reliable. Now employed. Can furnish good references. Address No. 812.

WANT position as superintendent of yarn mill or plain weaving mill or overseer of large card room. Long experience. Good references. Address No. 813.

WANT position as overseer of carding at not less than \$3.00 per day. Now employed but prefer to change. Good experience. Fine references. Address No. 814.

WANT position as overseer of weaving or as salesman for chemical or sizing compounds. Long experience as overseer of weaving and slashing and can furnish satisfactory references. Address No. 815.

WANT position as superintendent. Special experience on combed yarns, both coarse and fine. Now employed as superintendent and can furnish best of references. Address No. 816.

WANT position as superintendent. Have been overseer in good mills for 20 years and feel competent to run a mill. Have made good on past jobs and can make good as superintendent. Address No. 820.

WANT position as overseer of weaving. Experience on chevots, chambrays, sheetings and drills. Married; age 32. Good references. Address No. 821.

WANT position as superintendent. Have 15 years experience as overseer and superintendent on from 6 to 30s and sheeting, ratines and dress goods. Now employed. Can furnish best of references. Address No. 822.

WANT position as superintendent or as carder and spinner. Experience in both yarn and weaving mills and can give satisfaction. Am now employed but would change for larger job or promotion. Address No. 823.

WANTED position of superintendent by practical man with executive ability, fully capable of managing a mill, one who will stay on the job and get possible results. Ten years as superintendent, twelve as overseer. Experienced on yarns and plain weaves. Now employed. A-1 references. Address No. 824.

WANT position as overseer carding. 8 years experience as machinery erector and carder. Married. Good references. Can change on ten days notice. Address No. 825.

# CLASSIFIED LIST OF ADVERTISERS

- |   |   |  |   |
|---|---|--|---|
| <p><b>AUTOMATIC BANDING MACHINES</b><br/>Cole Bros.</p> <p><b>BALING PRESSES</b><br/>Boomer and Boschert Press Co.<br/>Saco-Lowell Shops.</p> <p><b>BEAMERS</b><br/>T. C. Entwistle Co.<br/>Saco-Lowell Shops.</p> <p><b>BELTING</b><br/>American Supply Co.<br/>Bradford Belting Co.<br/>Philadelphia Belting Co.</p> <p><b>BOBBINS AND SPOOLS</b><br/>American Supply Co.<br/>David Brown Co.<br/>Draper Co.</p> <p><b>BOILERS</b><br/>Dillon Steam Boiler Works.</p> <p><b>BOILER GRAPHITE</b><br/>Jos. Dixon Crucible Co.</p> <p><b>BRUSHES</b><br/>D. D. Felton Brush Co.</p> <p><b>CARD CLOTHING</b><br/>W. H. Bigelow.<br/>Jos. Sykes Bros.</p> <p><b>CARDS</b><br/>Mason Machine Works.<br/>Saco-Lowell Shops.</p> <p><b>CLOTH ROOM MACHINERY</b><br/>Woonsocket Machine and Press Co.<br/>Saco-Lowell Shops.</p> <p><b>COMMISSION MERCHANTS</b><br/>Grinnell Willis &amp; Co.<br/>Richard A. Blythe.</p> <p><b>DOBBIES</b><br/>Crompton &amp; Knowles Loom Wks.<br/>Mason Machine Works.<br/>Kilburn, Lincoln &amp; Co.<br/>The Stafford Company.</p> <p><b>DRAWING FRAMES</b><br/>Mason Machine Works.<br/>Saco-Lowell Shops.<br/>Woonsocket Machine and Press Co.</p> <p><b>DRAWING ROLLS</b><br/>Metallic Drawing Roll Company.</p> <p><b>DRINKING FOUNTAINS</b><br/>Puro Sanitary Drinking Fountain Co.</p> <p><b>DROP WIRES</b><br/>Connecticut Mill Supply Co.</p> | <p><b>DYESTUFFS AND CHEMICALS</b><br/>American Dyewood Co.<br/>Arabol Mfg. Co.<br/>Bossom and Lane.<br/>Cassela Color Co.<br/>John P. Marston.<br/>Faberwerke-Hoechst Co.<br/>A. Klipstein &amp; Co.<br/>Seydel Manufacturing Co.<br/>So. Dyestuff &amp; Chemical Co.</p> <p><b>DYEING, DRYING, BLEACHING AND FINISHING MACHINERY</b><br/>Philadelphia Tex. Machinery Co.<br/>C. G. Sargents Sons.<br/>H. W. Butterworth &amp; Sons Co.<br/>Saco-Lowell Shops.</p> <p><b>ELECTRICAL MACHINERY</b><br/>General Electric Co.<br/>Westinghouse Electric Co.</p> <p><b>FIRE HOSE AND FITTINGS</b><br/>American Supply Co.</p> <p><b>FELTS</b><br/>American Felt Co.</p> <p><b>FUEL</b><br/>Clinchfield Fuel Co.</p> <p><b>GRID BARS</b><br/>Atherton Pin and Grid Bar. Co.</p> <p><b>HUMIDIFIERS</b><br/>American Moistening Co.<br/>Stuart W. Cramer.<br/>G. M. Parks Co.</p> <p><b>HUMIDIFYING MACHINES</b><br/>C. G. Sargents Sons Corp.</p> <p><b>LOOMS</b><br/>Crompton &amp; Knowles Loom Works<br/>Draper Company.<br/>Kilburn, Lincoln Co.<br/>Mason Machine Works.<br/>Saco-Lowell Shops.<br/>Stafford Company.</p> <p><b>LOOM CRANK SHAFT PRESSES</b><br/>Clayton Jones Mfg. Co.</p> <p><b>LOOM HARNESS, REEDS AND PICKERS</b><br/>American Supply Co.<br/>Garland Mfg. Co.<br/>E. H. Jacobs Mfg. Co.</p> <p><b>LOOM STRAPPING</b><br/>E. H. Jacobs Mfg. Co.</p> <p><b>LUBRICANTS</b><br/>Albany Lubricating Co.<br/>Jos. Dixon Crucible Co.</p> <p><b>LUG STRAP</b><br/>E. H. Jacobs Mfg. Co.</p> <p><b>MILL CRAYONS</b><br/>American Supply Co.</p> | <p><b>MILL SUPPLIES</b><br/>American Supply Co.<br/>Connecticut Mill Supply Co.</p> <p><b>OVERHAULERS</b><br/>Southern Spindle &amp; Flyer Co.</p> <p><b>PICKERS AND LAPPERS</b><br/>Saco-Lowell Shops.</p> <p><b>PREPARATORY MACHINERY</b><br/>Fales and Jenks Machine Co.<br/>Saco-Lowell Shops.</p> <p><b>PRESSES</b><br/>Boomer and Boschert Press Co.</p> <p><b>POWER TRANSMISSION MACHINERY</b><br/>Woonsocket Machine and Press Co.</p> <p><b>PUMPS</b><br/>Stuart W. Cramer.</p> <p><b>RAILROADS</b><br/>Seaboard Air Line.<br/>Southern Railway.</p> <p><b>REEDS</b><br/>J. A. Gowdey Reed &amp; Har. Mfg. Co.</p> <p><b>RING SPINNING FRAMES</b><br/>Fales and Jenks Machine Co.<br/>Mason Machine Works.<br/>Saco-Lowell Shops.</p> <p><b>RING TRAVELERS</b><br/>American Supply Co.<br/>Dary Ring Traveler Co.<br/>U. S. Ring Traveler Co.</p> <p><b>ROLLS</b><br/>Metallic Drawing Roll Co.<br/>Saco-Lowell Shops.</p> <p><b>ROVING MACHINERY</b><br/>Saco-Lowell Shops.<br/>Woonsocket Machine and Press Co.</p> <p><b>SADDLES</b><br/>Dixon Lubricating Saddle Co.</p> <p><b>SEPARATORS</b><br/>Draper Company.</p> <p><b>SHUTTLES</b><br/>David Brown Co.<br/>Shambow Shuttle Co.<br/>Union Shuttle Co.</p> <p><b>SIZING COMPOUND</b><br/>Arabol Mfg. Co.<br/>John P. Marston.<br/>A. Klipstein &amp; Co.<br/>Keever Bros. Co.<br/>Seydel Mfg. Co.<br/>So. Dyestuff &amp; Chemical Co.</p> <p><b>SLASHERS</b><br/>Saco-Lowell Shops.</p> <p><b>SLASHER CLOTH</b><br/>American Felt Co.</p> | <p><b>SLASHER OIL</b><br/>W. C. Robinson &amp; Sons Co.</p> <p><b>SOAPS</b><br/>India Alkali Works.<br/>Keever Bros. Co.<br/>Seydel Mfg. Co.</p> <p><b>SOFTENERS—COTTON</b><br/>Arabol Mfg. Co.<br/>New Brunswick Chemical Co.<br/>A. Klipstein &amp; Co.<br/>Seydel Mfg. Co.<br/>So. Dyestuff &amp; Chemical Co.</p> <p><b>SPINDLE</b><br/>Draper Company.</p> <p><b>SPINNING RINGS</b><br/>Connecticut Mill Supply Co.<br/>Draper Company.<br/>Whitinsville Spinning Ring Co.<br/>Pawtucket Spinning Ring Co.</p> <p><b>SPOOLERS</b><br/>Draper Co.<br/>Easton and Burnham Machine Co.<br/>Saco-Lowell Shops.</p> <p><b>STARCH</b><br/>Keever Bros. Co.<br/>Keever Starch Co.</p> <p><b>TEMPLES</b><br/>Draper Company.</p> <p><b>TWISTERS</b><br/>Draper Company.<br/>Fales and Jenks Machine Co.<br/>Saco-Lowell Shops.</p> <p><b>WARP STOP MOTIONS</b><br/>Crompton &amp; Knowles Loom Works<br/>Draper Company.<br/>The Stafford Co.</p> <p><b>WEIGHTING COMPOUNDS</b><br/>Arabol Mfg. Co.<br/>Bossom &amp; Lane.<br/>Faberwerke-Hoechst Co.<br/>John P. Marston.<br/>Keever Bros. Co.<br/>A. Klipstein &amp; Co.<br/>Seydel Mfg. Co.<br/>So. Dyestuff &amp; Chemical Co.</p> <p><b>WARPERS</b><br/>T. C. Entwistle Co.<br/>Draper Co.</p> <p><b>WILLOWS</b><br/>Saco-Lowell Shops.<br/>C. G. Sargents Sons Co.</p> <p><b>WINDERS</b><br/>Easton and Burnham Machine Co.<br/>Saco-Lowell Shops.</p> |
|---|---|--|---|

## Joseph Sykes Brothers, Huddersfield, England

### CARD CLOTHING MANUFACTURERS

Hardened and Tempered Steel Wire Plow Ground  
Card Clothing

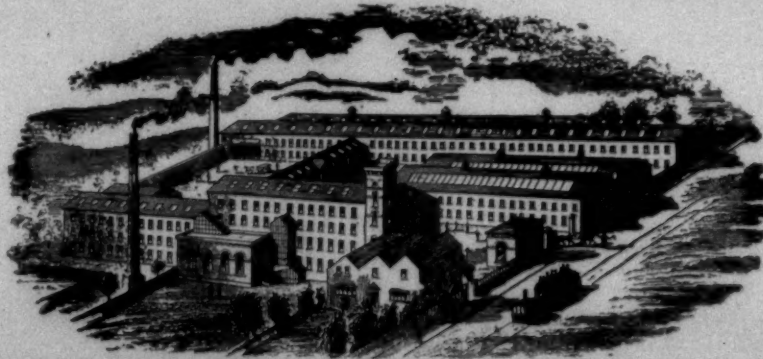
Revolving Top Flats Reclothed. Licker-ins Rewound. Burnisher and Stripper Fillets, Dronsfield's Grinder Rolls. Emery Fillets. All Regular sizes of Card Clothing always in Stock and Shipped same Day Order is Received.

**RICHARD D. THOMAS, Southern Agent**

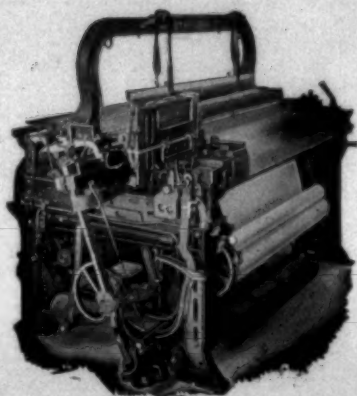
### REPAIR SHOPS AND STOCK ROOMS

TOMPKINS BUILDING  
P. O. Box 88  
CHARLOTTE, N. C.

4½ PETERS STREET  
P. O. Box 793  
ATLANTA, GA.



## "IDEAL" AUTOMATIC LOOMS



Unsurpassed in Simplicity, Durability and other Desirable Qualities. No special mill supplies required. They make less waste than any other loom.

### They Produce Superior Cloth

We invite correspondence and investigation

**THE STAFFORD COMPANY**  
READVILLE, MASS.

FRED H. WHITE, Southern Agent  
Independence Building, Charlotte, N. C.

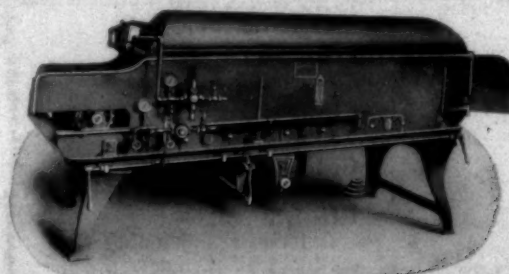
## "PROCTOR" DRYERS FIREPROOF



Substantial, Durable, and low cost of operation. Dryers for all kinds of Material

**The Philadelphia Textile Machinery Company**  
BUILDERS OF DRYING MACHINERY  
PHILADELPHIA H. G. MAYER, CHARLOTTE, N. C.

## The Yarn Conditioning Machine



Continuous in operation  
**C. G. Sargents Sons Corp.**  
Graniteville, Massachusetts  
Southern Agent  
**J. S. COTHRAN**  
Charlotte, N. C.

## Clark's Directory of Southern Cotton Mills

Complete and accurate information relative to Southern Cotton Mills

Pocket Size—Price \$1.00 CLARK PUB. CO., CHARLOTTE, N. C.

Good  
Leather  
Belt  
Makers



The  
Bradford  
Belting  
Co.  
CINCINNATI

Pioneers in the Manufacture of Hand Threading Shuttles

ORGANIZED 1883

## UNION SHUTTLE COMPANY

Power Loom Shuttles of Every Description



Self Threading and Corrugated Cop Shuttles a Specialty  
Fitted with Porcelain Eye, for Woolen and Worsted Weaving

TELEPHONE CONNECTIONS

OFFICE AND FACTORY  
Cor. Market and Foster Street  
Lawrence, Mass.

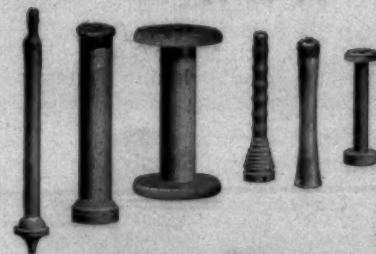
Lawrence, Mass.

## THE DAVID BROWN COMPANY

DAVID BROWN, President and Treasurer  
GEO. C. BROWN, Superintendent

Manufacturers of

**Bobbins, Spools**  
and **Shuttles** For Cotton and Woolen Mills



Market and Foster Sts.

LAWRENCE, MASS.

We carry a full line of General Supplies and make a specialty of equipping new mills

WE MANUFACTURE

Oak Tanned Leather Loom Harness,  
Belting. Weaving Reeds

**AMERICAN SUPPLY COMPANY**  
PROVIDENCE, R. I.